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OfficeServ 100

General Description Guide

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INTRODUCTION

Purpose

OfficeServ 100, Enterprise IP Solutions System, is a digital telephone system designed for small to medium-sized businesses
This guide provides an overview of the Samsung OfficeServ 100 including system structure, hardware, features, facilities and specifications.

Document Content and Organization

This guide is composed of 4 Chapters and 1 Annex. Each chapter is introduced as follows:

CHAPTER 1. Introduction to System

This chapter describes the introduction to OfficeServ 100 system such as general description, size, configuration, technology, and programming.

CHAPTER 2. Hardware Descriptions

This chapter describes hardware descriptions of OfficeServ 100 such as key service unit, interface cards, and station equipment.

CHAPTER 3. Specifications

This chapter describes the technical data for the OfficeServ 100 hybrid/key telephone system such as electrical specifications key service unit, interface cards, station equipment.

CHAPTER 4. Business Feature Package

This chapter describes various features of the OfficeServ 100 system.

ANNEX A. Abbreviation

Acronyms frequently used in this guide are described.

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Conventions

The following special paragraphs are used in this document to point out information that must be read. This information may be set-off from the surrounding text, but is always preceded by a bold title in capital letters.

NOTE

Indicates additional information as a reference.

Reference

OfficeServ 100 Programming Manual

Introduces programming method for the OfficeServ 100 system users. Users can configure the system using the MMC (Man Machine Communication) program at the digital telephone. This manual describes how to use the MMC program.

OfficeServ 100 Installation Manual

Introduces the installation related information for OfficeServ 100 system.

Revision History

EDITION	DATE OF ISSUE	REMARKS
00	10. 2004.	First Edition

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TABLE OF CONTENTS

INTRODUCTION I

Purpose I
Document Content and Organization I
Conventions II
Reference II
Revision History II

CHAPTER 1. Introduction To System 1-1

1.1 General Description 1-1
1.2 Size and Configuration 1-3
1.3 Technology 1-6
1.3.1 Switching 1-6
1.3.2 Memory 1-7
1.3.3 Microprocessors 1-7
1.4 Programming 1-8

CHAPTER 2. Hardware Descriptions 2-1

2.1 Key Service Unit 2-2
2.1.1 Ring Generator Unit RGU1 or RGU2 2-3
2.1.2 MISC Card 2-3
2.2 Expansion Cabinet 2-5
2.3 Interface Cards 2-5
2.4 Station Equipment 2-8
2.4.1 iDCS Series Equipment 2-8
2.4.2 DCS Series Equipment 2-12

CHAPTER 3. Specifications 3-14

3.1 Electrical Specifications 3-14
3.1.1 Dimensions and Weights 3-14
3.1.2 Environments 3-15

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3.1.3 Cable Requirements 3-15
3.1.4 System Tones 3-15
3.1.5 Keyset LEDs 3-16

CHAPTER 4. Business Feature Package 4-1

4.1 System Features 4-2
4.1.1 System Feature Descriptions 4-3
4.2 Station Features 4-31
4.2.1 Station Feature Descriptions 4-32
4.3 Display Features 4-39
4.3.1 Display Feature Descriptions 4-39
4.3.2 Sample Displays 4-44
4.3.3 Sample Caller ID Displays 4-45
4.3.4 Sample UCD Displays 4-46
4.4 Sample SMDR Printout (Without Caller ID) 4-47
4.5 Sample SMDR Printout (With Caller ID) 4-48
4.6 Sample UCD Report 4-49
4.7 UCD Call Statistics 4-50
4.7.1 Calls in Queue Now 4-50
4.7.2 Abandoned Calls 4-50
4.7.3 Average Ring Time 4-50
4.7.4 Number of Times All Agents Busy 4-50
4.7.5 Average Time in Queue 4-50
4.7.6 Total Calls Received 4-51
4.7.7 Longest Queue Time Today 4-51
4.7.8 Longest Queue Time Now 4-51
4.8 UCD Agent Statistics 4-52
4.8.1 Logged In 4-52
4.8.2 Status 4-52
4.8.3 Calls Answered 4-52
4.8.4 Average Call Time 4-52
4.8.5 Average Ring Time 4-52
4.9 Sample Traffic Report 4-53
4.10 Traffic Report Overview 4-55
4.10.1 Beginning & Ending 4-55
4.10.2 Activity 4-55
4.10.3 Incoming Trunk Calls-Answered 4-55
4.10.4 Incoming Trunk Calls-Not Answered 4-55

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4.10.5 Outgoing Trunk Calls 4-55
4.10.6 A Selected Trunk Was Busy....4-56
4.10.7 Intercom Calls Completed....4-56
4.10.8 Intercom Calls Not Completed 4-56
4.10.9 Trunk Recalls to Station 4-56
4.10.10 Trunk Recalls to Operator Group....4-56
4.10.11 Internal Page Used 4-56
4.10.12 External Page Used....4-56
4.10.13 All Page Used 4-56
4.10.14 Group....4-57
4.10.15 Outgoing 4-57
4.10.16 Busy....4-57
4.10.17 Trunk....4-57
4.10.18 Trunk Name 4-57
4.10.19 ATTA....4-57
4.10.20 ANSD....4-57
4.10.21 Not-ANSD....4-58
4.10.22 Outgoing 4-58
4.10.23 Busy....4-58
4.10.24 Outside Calls 4-58
4.10.25 Group....4-58
4.10.26 ANSD (Answered) 4-58
4.10.27 Not-ANSD....4-58
4.10.28 Intercom....4-58
4.10.29 ANSD....4-59
4.10.30 Outside Calls 4-59
4.10.31 EXT....4-59
4.10.32 Station Name 4-59
4.10.33 ATTA....4-59
4.10.34 ANSD....4-59
4.10.35 Not-ANSD....4-59
4.10.36 Dialled....4-60
4.10.37 ICM-TRSF....4-60
4.10.38 TRK-TRK....4-60
4.10.39 Pickup....4-60
4.10.40 Intercom....4-60
4.10.41 ANSD....4-60
4.10.42 Dialled....4-60

4.11 Sample Alarm Report....4-61

4.12 DECT Service....4-62

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ANNEX A. ABBREVIATION A-1

A ~ D A-1
E ~ M A-2
O ~ T A-3
U ~ W A-4

LIST OF FIGURES

Figure 1.1 OfficeServ 100 General System Diagram 1-2
Figure 1.2 OfficeServ 100 Configuration Matrix Table (with Analogueue Trunks)-Expansion A type 1-5
Figure 1.3 OfficeServ 100 Configuration Matrix Table (with Digital Trunks)-Expansion A type 1-5
Figure 1.4 OfficeServ 100 Configuration Matrix Table (with Analogueue Trunks)-Expansion B type 1-6
Figure 1.5 OfficeServ 100 Configuration Matrix Table (with Digital Trunks)-Expansion B type 1-6
Figure 1.6 OfficeServ 100 System Configuration (Basic KSU + Expansion A) 1-6
Figure 1.7 OfficeServ 100 System Configuration (Basic KSU + Expansion B) 1-6

Figure 2.1 OfficeServ 100 KSU 2-2
Figure 2.2 28 Button iDCS Keyset 2-8
Figure 2.3 18 Button iDCS phone 2-8
Figure 2.4 8 Button iDCS Keyset 2-8
Figure 2.5 64 Button iDCS AOM 2-8
Figure 2.6 14 Button iDCS AOM 2-8
Figure 2.7 DS-5012L 2-8
Figure 2.8 DS-5014D 2-9
Figure 2.9 DS-5021D 2-9
Figure 2.10 ITP-5012L 2-10
Figure 2.11 ITP-5014D 2-10
Figure 2.12 ITP-5021D 2-10
Figure 2.13 DS-5064B 2-11
Figure 2.14 WBS24 2-12
Figure 2.15 WIP-5000M 2-12
Figure 2.16 LCD 24B Euro Keyset 2-12
Figure 2.17 STD 24B Keyset 2-12
Figure 2.18 STD 12B Keyset 2-12
Figure 2.19 6B LCD Model Keyset 2-12
Figure 2.20 48 Button AOM 2-12

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Figure 2.21A DS 24S Keyset 2-12
Figure 2.21B DS 24D Keyset 2-12
Figure 2.22 Economic Keyset 2-13
Figure 2.23 Door Phone Interface Module 2-13
Figure 2.24 Door Phone 2-13
Figure 2.25 Single Line Telephone 2-14

LIST OF TABLES

Table 3.1 Electrical Specifications 3-14
Table 3.2 Dimensions and Weights 3-14
Table 3.3 Environments 3-15
Table 3.4 Cable Requirements 3-15
Table 3.5 System Tones 3-15
Table 3.6 Keyset LEDs 3-16

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CHAPTER 1. Introduction To System

This chapter describes the introduction to OfficeServ 100 system as follows.

- General Description
- Size and Configuration
- Technology
- Programming

1.1 General Description

OfficeServ 100(Enterprise IP Solutions System), DCS (Digital Communication System), is a digital telephone system designed for small to medium-sized businesses. It can operate with the functionality of a square key system, PABX or a combination of both(hybrid). OfficeServ 100 employs the very latest DSP (Digital Signal Processor) technology.

OfficeServ 100 offers a variety of interface cards that allow connection to the public telephone network or private networks. These are generally referred to as trunk cards. Two types of telephones can be connected to the systems. Proprietary digital phones called ‘Keysets’ are connected to DLI (Digital Line Interface) cards. Standard telephone sets generally called ‘single line telephones’ are connected to SLI (Single Line Interface) cards. In addition, DLI station ports are used to connect peripheral devices such as door phones and add-on modules. Miscellaneous circuits are provided to allow such optional features as external paging, music on hold, background music, common audible devices, alarms and emergency power failure telephones.

All DCS keysets utilize a single PCB with surface-mounted components assuring the highest product quality and long life. Samsung’s customary large, easy-to-read displays and LEDs in the button design make them much easier to use. In many instances, sophisticated features are made simple through the use of friendly display prompts or push-on/push-off feature keys.

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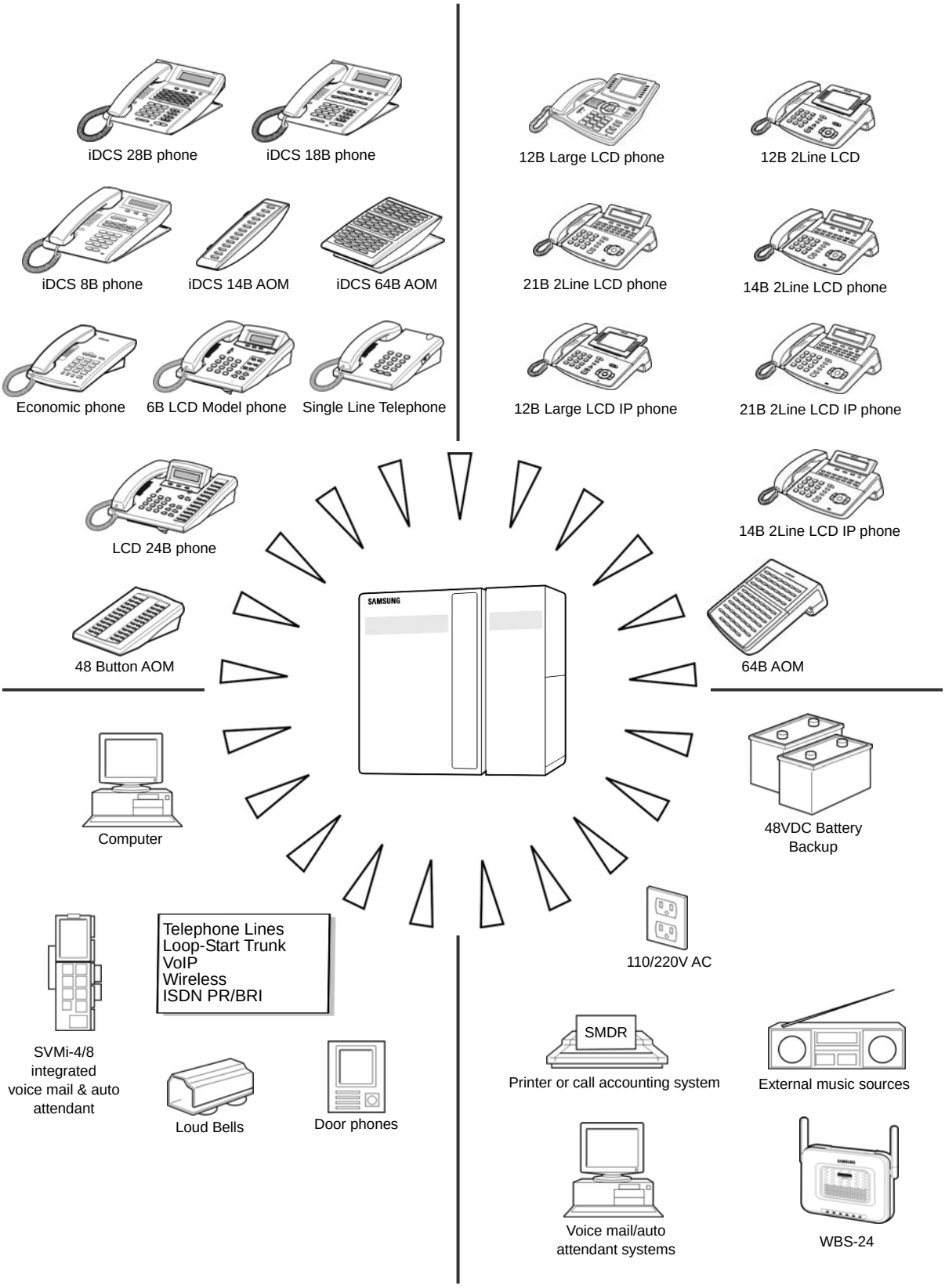

Figure 1.1 OfficeServ 100 General System Diagram

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1.2 Size and Configuration

The OfficeServ 100 system consists of the basic KSU (Key Service Unit), an Expansion cabinet, Interface cards and Digital keysets. The KSU begins with eight keyset ports expandable to 18 analogueue C.O. line ports, or 24 lines if 4 BRI cards are used, or 32 stations. In addition, up to 8 keyset daughter boards may be added to the system along with the optional 2 SLI card.

The Expansion cabinet A type has three Universal slots and one DCS slot for TEPRI (PRI) or SVMi-8, which provides the maximum configuration of 66 ports with analogueue trunk lines or 96 ports with Digital trunk lines.

The Expansion cabinet B type has two Universal slots and two DCS slot for TEPRI (PRI) or SVMi-8, which provides the maximum configuration of 58 ports with analogueue trunk lines or 88 ports with Digital trunk lines.

Two types of telephones can be connected to the system: proprietary digital stations called ‘keysets’ that connect to DLI ports and standard telephone sets, generally called ‘Single Line Telephones’, that connect to SLI ports.

The system also has an optional MISC card, which provides Music on Hold facilities, two serial I/O ports and other useful facilities.

The following charts(Figures 1.2, 1.3, 1.4, 1.5) describe configurations using the basic KSU, an Expansion cabinet and expansion cards. However, by using the DCS’s unique KDB(Keyset Daughter Board), which are installed in the base of a digital keyset, the capacity of the system can be increased by one station per KDB. Installing a KDB-DLI adds another digital port while a KDB-SLI adds a single line port. Mix and match these two types of KDB to get up to a total of 8 KDB in the system. Using this method allows the OfficeServ 100 to expand to a maximum of 64 stations. Adding the optional 2 SLI card to the KSU provides a further two SLI ports.
The combination of the basic 008 KSU plus three expansion cards in the KSU plus three expansion cards and one DCS card in the Expansion cabinet plus 8 KDB plus a 2 SLI card provides a maximum configuration of 96 ports plus Miscellaneous card.

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NOTE

Installation environment

- Only one 2 SLI card can be installed in the system.
- Only one MISC card can be installed in the system.
- ISDN cards(BRI, PRI and TEPRI) require a PLL card installed in the KSU.
- Expansion A type consists of three universal expansion slots and one DCS card slot for TEPRI(PRI) or SVMi-8.
- Expansion B type consists of two universal expansion slots and two DCS card slot for TEPRI(PRI) and SVMi-8.
- Only 8 KDB can be installed in the keysets connected to the 008 Basic KSU
- OfficeServ 100 system can have up to 48 stations if SVMi-8 (or MGI3) is not used.
- OfficeServ 100 system can have up to 40 stations if SVMi-8 (or MGI3) is used.
- SVMi-8 or MGI3 card power consume 8 stations
- 4WLI MAX power consume 16 stations (an WBS-24 AP power consume 4 stations)
- Large LCD Keyset (DS-5012L) power consume be three times as much stations.

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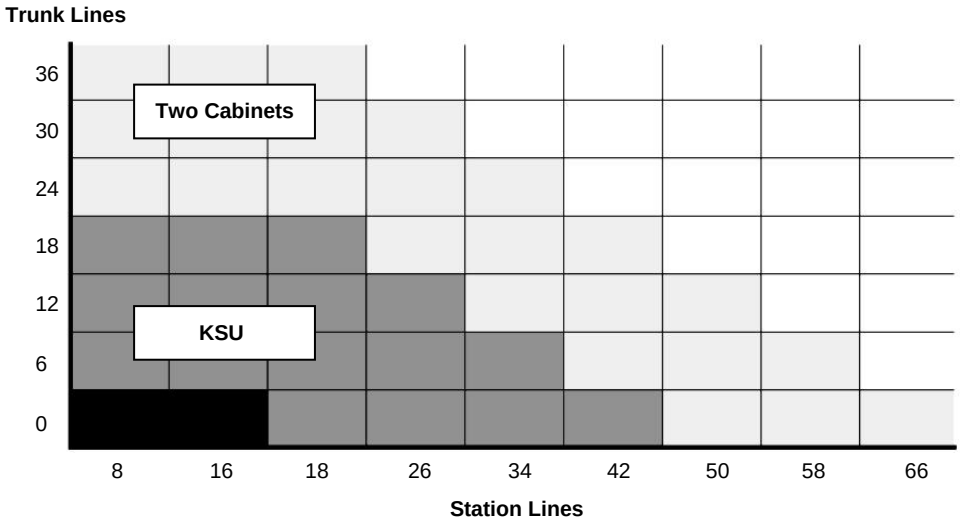

Figure 1.2 OfficeServ 100 Configuration Matrix Table (with Analogueue Trunks)-Expansion

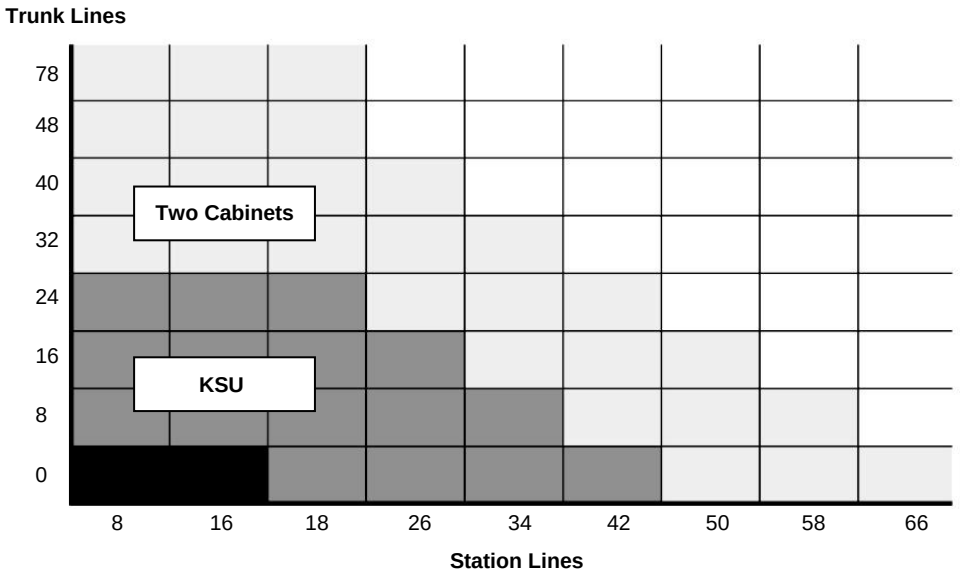

Figure 1.3 OfficeServ 100 Configuration Matrix Table (with Digital Trunks)-Expansion

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The Figure 1.6 describes OfficeServ 100 system configuration using the Basic KSU and Expansion type cabinet.

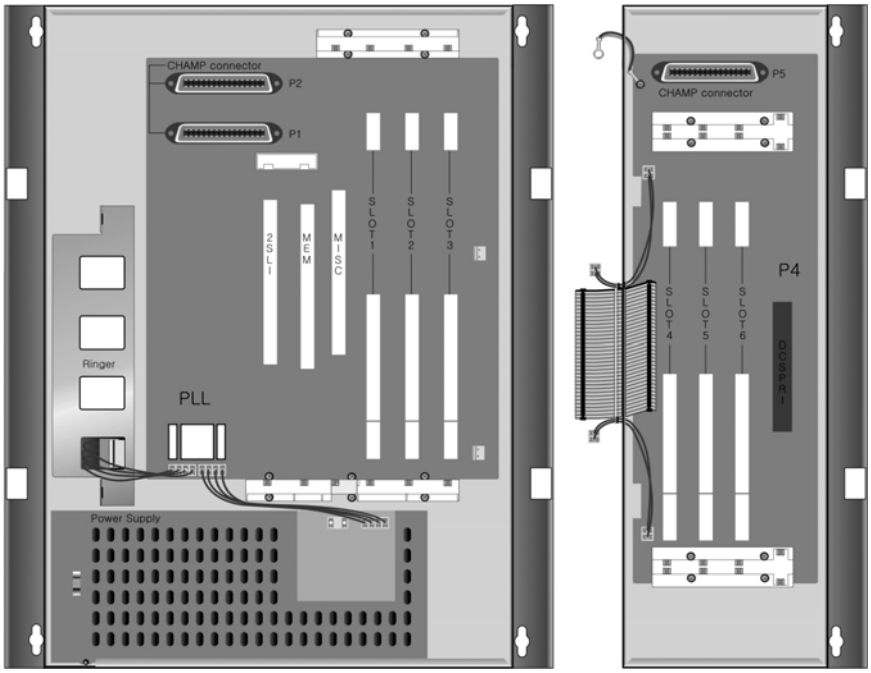

Figure 1.6 OfficeServ 100 System Configuration (Basic KSU + Expansion)

1.3 Technology

1.3.1 Switching

System switching is accomplished by means of a custom IC 'engine' that provides 256 switchable digital channels. The engine is controlled by its own 16-bit Motorola® MC 68000 microprocessor and switching control program. Each of the 256 digital channels is automatically assigned to carry voice or data as required by system operation in a PCM format.

In addition to the 256 channels mentioned above, the systems also utilize DSP. Each DSP may be configured by the switching control program as a DTMF sender, a DTMF receiver or as a C.O. tone detector on a per-call basis. Each engine chip contains 4 DSP channels.

Four additional DSP are added when a MISC card is installed. This means that the system contains a total of 8 DSP channels when fully expanded. The DSP channels are fully shared throughout the system as a common resource.

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1.3.2 Memory

The systems operate using stored program control. This program is stored in EPROM chips or flash memory. All specific customer data is stored in RAM(Random Access Memory) which is protected against the loss of AC power to the system by an on-board battery backup system.

The OfficeServ 100 program is stored on a 16 Mbytes NAND flash memory on the Main Control Processor(MCP1) card. The system boots from a 512 Kbytes boot ROM and downloads the operating program into 32 megabytes of SDRAM on the MCP1 card.
The customer database is stored in 1 Mbytes of non-volatile SRAM.

1.3.3 Microprocessors

OfficeServ 100 uses distributed processing. The primary processor of the system is a 16-bit Motorola® MC68000 operating at a clock speed of 16 MHz. Secondary processing is in the some special cards like as BRI and also done in the keysets. The digital keyset uses a Hitachi H8 processor for data communication within the OfficeServ 100.

The OfficeServ 100 uses distributed processing. Its primary processor is a 32 bit Motorola MPC855 operating at a clock speed of 50 MHz on the MCP1 card.
These secondary processor are MC68EC000 processor(008 Base Board) running at 16 MHz and provide local control of cards.

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1.4 Programming

The OfficeServ 100 system arrives from the factory with default data.
Connect it to trunks, stations and power. Turn the system on and it is fully operational. The only thing left to do is customize the data to fit the customer's needs. This is called programming the system.

MMC stands for Man Machine Communication and each program is assigned a different three digit code(e.g., 100). These MMC codes are used to view, create or change customer data. Programming is simply deciding what needs to be done and knowing which MMC is used to do it. For example: use MMC 601 to designate a station group; enter system speed dial numbers in MMC 705.

The OfficeServ 100 is a self-configuring system. This means that immediately after applying power, the OfficeServ 100 reads the types and locations of all installed interface cards and phones and assigns default data to them. This data provides for system operation within a few minutes after applying power. The numbering of the LAN is flexible and may be changed to suit customer requirements. The installing technician customizes this default data to meet the end user's requirements.

The system can be programmed from any LCD display phone without interrupting system operation. There are three levels of programming: technician, customer and station.
The technician level has access to all programs and can allow the customer access to system programs as needed. Technician and customer access levels are controlled by a different security passcodes and access procedure.

The OfficeServ 100 also allows the use of a proprietary computer program called DPAP-PCMMC. This is also known as OfficeServ Manager, which presents the user with a number of icons on the launch pad. These icons indicate the systems which can be programmed. For the OS100 a small patch file is run after installing OfficeServ Manager. This file adds an icon for OSM_100P – this is used to start the OSM 100 programming. This permits a technician to program the system using a personal computer. DPAP-PCMMC can be used on-site to modify the customer database or to download (save) the entire customer database to a file. This file can then be saved as a backup and be uploaded when required to restore the database.

Through the use of modems, DPAP-PCMMC can access the OfficeServ 100 system remotely (off-site) to make database changes or perform uploads or downloads of the customer database as if the technician were on-site.

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CHAPTER 2. Hardware Descriptions

This chapter describes the hardware of the OfficeServ 100 system as follows.

- KSU
- Interface Cards
- Station Equipment

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2.1 Key Service Unit

The OfficeServ 100 KSU is a single metal cabinet containing the following:

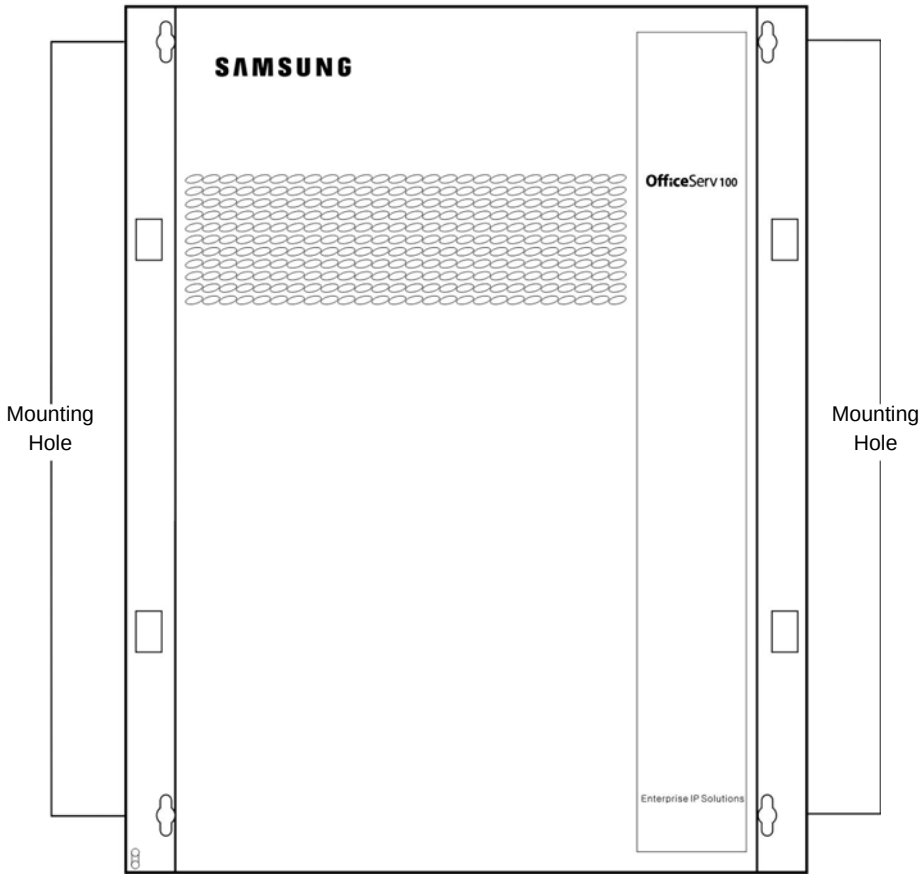

Figure 2.1 OfficeServ 100 KSU

- A power supply
- Processing and switching
- Eight 2B+D digital keyset interfaces
- Memory Card
  - MEM3: A removable MEM3 card, containing 3 Mbyte Program memory, 1 Mbyte Data memory with a back-up super capacitor, real time clock, a monitor LED and a RAM clear switch
  - MEM4: A removable MEM4 card, containing 3 Mbyte Program memory, 1 Mbyte Data memory(only 512 Kbyte is back-up), 512 Kbyte common memory, real time clock, a monitor LED, a RAM clear switch, and LAN interface
  - MCP1: A removable MCP1 card, containing 16 Mbyte NAND Flash memory, 0.5 MByte Boot Flash memory, 32 MByte SDRAM memory, 2 Mbyte SRAM Data memory(with SP Program and Data memory), 2 Kbyte DPRAM for IPC communication MP & SP Processor, real time clock, a monitor & LAN status LED, a RAM clear switch, and LAN interface

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- 2 Champ connectors for external connections and other connectors for the Expansion cabinet and the Ring Generator Unit
- One Internal Music source or an External Music interface for Music-on-Hold and Back-ground Music
- One External Page interfaces
- One general-purpose Dry contact
- Three universal expansion slots, a MEM(MCP1 or MEM3 or MEM4) card slot, a 2 SLI card slot and a MISC(MISC 1(2) or MISC 3(4)) card slot

2.1.1 Ring Generator Unit RGU

Two kinds of sinusoidal-waveform Ring Generator Units are available. The RGU drives 3W ring signals.

2.1.2 MISC Card

MISC 1 or MISC 2 Card (only use in the iDCS 100 or DCS 70 system)

One dedicated slot in the Basic KSU is for an MISC card and two kinds of MISC cards are available. MISC 1(2) cards only used together with the MEM4(or MEM3 or MEM2: iDCS 100 or DCS Compact II SYSTEM) cards. New MISC 1A(2A) Card installed with 500 MODEM is not operation SIO 1 RS232C.
The MISC 1 card contains one additional External Music Interface for MOH or BGM, one additional External Page Interface, one Alarm Sensor Detection circuitry, 4 channels DTMF receiver, three General-purpose Dry contact relays, 8 channel FSK Caller-ID Receive, two RS232C Serial interfaces with connectors for PCMMC and SMDR and external local MODEM interface. The MISC 2 card is similar to the MISC 1 card but is also equipped with a built-in 4-ch AA function.
It is strongly recommended that this card be used in situations requiring heavy single line telephone use.

MISC 3 or MISC 4 Card (only use in the OfficeServ 100 system)

Many miscellaneous function DTMF receiver (4ch), BGM, PAGE, Common Purpose Relay(3port), CID Rx, 500 MODEM(option) are MISC 3. MISC 4 support MISC 3 feature and 4 Channel AA. MISC 3(4) SIO Port no serviced, MCP1 SIO Port serviced consequently. New feature support the FSK Caller ID sender to SLT: With total 16 Channel for FSK CID Tx & Rx ports.
Only used 500 MDOEM Optional D-board and 3 pin cable connected the MCP1 board for MP serial data (TXD, RXD ,GND) signalling to the MODEM.

500 MODEM Card (common use the OfficeServ 500)

One built-in 500 MODEM card can be installed in a MISC 3(or 4) card for OfficeServ 100 system or MISC 1A(or 2A) for iDCS 100 or DCS Compact-II system.. The DCS70 modem card cannot be used on the OS100.

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PLL Card

Any ISDN card, that is a BRI or a PRI, requires the PLL card which can be installed in a dedicated place on the KSU mother board.

MEM4 Card (iDCS 100 system only)

MEM4 card with LAN interface module, no selectable options. The LAN module is required to expand the system memory, to provide SIO ports 1EA, and a 10/100 BASE-T LAN interface processor.
MEM4 card has Flash memory to support new features Window PC-MMC, ITM3, TEPRI cards and Networking solution by TE/PRI, Program/Database up/download by LAN interface.

MCP1 Card (OfficeServ 100 system only)

MCP1 card is the main processor card with a 32 bit processor, and controls the overall operation of the OfficeServ 100 system, supported with RJ45 LAN Interface, DB9 SIO Connecter and IPC(Inter Processor Communication) with SP(68EC000 in the 008Base Board), no selectable options. The LAN module is required to expand the system memory, to provide SIO ports 1EA, and a 10/100 BASE-T LAN interface processor.

- Supports most of the current iDCS 100(DCS 70) cards.
- Supports new MISC 3(4), MGI3 and 4WLI cards & other cards, except MISC 1/2, ITM3 Cards.

The procedures for mounting and connecting connectors, LED indicator, memory back-up ON/OFF switch, and only used 500 MDOEM optional d-board and 3 pin cable connected the MCP1 Card for MP serial data(TXD, RXD ,GND) signalling to the 500 MODEM.

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2.2 Expansion Cabinet

One metal Expansion cabinet can be attached to the KSU for expansion. The Expansion consists of three Universal expansion slots and one DCS card slot for TEPRI(PRI) or SVM i-8. The Expansion cabinet connects to the KSU via a 64-pin flat cable, two 2-wire power connections and a F-GND connection.
It contains a 50-pin champ connector for external connections. Please note that a DCS card has its own connector.

2.3 Interface Cards

2 SLI Card (2SLIC)

The 2 SLI card is installed in a dedicated slot on the KSU mother board. The card provides two single line telephone interfaces equipped with Long Line protection and the ability to provide a loop disconnect signal.

3 TRK Card (DCS70 card) (3TRKD70)

The 3 TRK card provides three loop start C.O. interfaces with Caller ID relays. The first two C.O. interfaces are equipped with PFT relays. Each interface contains an interface for MPD or PRS which is optional. The MPD or PRS hybrid chips of the DCS system can be used.

6 TRK Card (DCS70 card) (6TRKD70)

The 6 TRK card provides six loop start C.O. interfaces. The first two C.O. interfaces are equipped with PFT relays. Each interface contains an interface for MPD or PRS which is optional. The MPD or PRS hybrid chips of the DCS system can be used.

4 TRK Card (DCS24 card) (4TRK24)

The 6 TRK card provides six loop start C.O. interfaces with Caller ID relays. Each interface contains an interface for MPD or PRS which is optional. The MPD or PRS hybrid chips of the DCS system can be used.

6 TRK Card (DCS24 card) (6TRK24)

The 6 TRK card provides six loop start C.O. interfaces with Caller ID relays . Each interface contains an interface for MPD or PRS which is optional. The MPD or PRS hybrid chips of the DCS system can be used.

4 BRI Card (BRID70)

The 4 BRI card contains four Basic Rate access ports, i.e., eight ISDN channels. Protocol is compatible for Euro-ISDN BRI. For S0 application, power feeding to ports is selectable by programming.

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TEPRI or PRI Card (500TEPRI)

The PRI card contains one Primary Rate access ports, i.e., thirty ISDN channels. Protocol is compatible for Euro-ISDN PRI. TEPRI card must be equipped into the last slot of the expansion cabinet. When programmed as an E1 this card provides up to 30 trunk circuits in any combination of the following:

- Loop start lines
- DID(Direct Inward Dialling)
- Ground start lines
- E & M tie lines or two way DID calling

8 DLI Card (8DLID70)

The 8 DLI card provides eight DLI ports.

8 SLI Card (8SLID70)

The 8 SLI card provides eight SLI ports for industry-standard single line telephones and the ability to provide a loop disconnect signal. Please note that this card does not provide Long Line protection.

6 MWSLI Card (6MWSLID70)

The 6 MWSLI card provides six SLI ports for industry-standard single line telephones and the ability to provide a loop disconnect signal and a message waiting signal. Please note that this card does not provide Long Line protection.

ITM3 Card 100ITM3

This is not used on the OS100 – theMGI card is used.

SVMi-4 Card (CADLT2VM)

The SVMi-4 is a self contained plug in voice mail and auto attendant card for the OfficeServ 100. It is designed to meet the demands of the sophisticated voice mail user without sacrificing simplicity.

The SVMi-4 may act as an Auto Attendant system only, a Voice Mail System only or both.

- Out of the box the SVMi-4 can handle 2 calls simultaneously. It can be easily upgraded to handle up to 4 calls simultaneously. No external line or power connections and necessary, these are accomplished directly through phone system
- At this time of this writing the memory capacity is about 5 hours, although change in technology will allow for additional storage as time go on. Only one card is permitted per system and it can be installed in any universal card slot.

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SVMi-8 Card

The SVMI-8 Voice Mail system is a fully integrated Auto Attendant/Voice Mail/Fax System on a single DCS circuit card. This optional card is designated the SVMi-8 and provides 4 or 8 channels of communication. Only one card is permitted per system and it can be installed in DCS slot on the expansion cabinet.

This fully featured self contained system is connected directly to the DCS data bus and communicates with the DCS Processor. This design means that installation time is minimized, operation is streamlined and many features can be implemented that are not normally possible with older conventional stand alone Voice Mail/Auto Attendant systems.

All power to run this self contained system comes from the power supply. Each of the power supply is rated according to the number of stations it will support. When SVMI-8 is installed it counts as eight stations of the PSU rating regardless of the number of Voice Processing Modules installed

MGI3 Card (OS100MGI)

The MGI3 card supports the VoIP Gateway, which enables telephone calls through the Internet. When mounted with the 500 MGI3 D-board, the MGI3 card can support up to 16 Internet telephone (VoIP) ports by adding 8 channels.
The main features and characteristics of the MGI3 card are summarized below.

- Up to 3 cards MGI3 shall be installed in the Basic cabinet 3 universal slot.
- Flash memory and data memory basically mounted for program
- Echo cancellation function supported preventing echo sounds
- Silence suppression function supported preventing data transfer on the network for the brief silent intervals between words during calls.
- Supports G.711, G.723.1(6.3k) and G.729A for Audio CODEC
- Supports T.38 regarding Fax

4WLI Card (OS100WLI)

The 4WLI card provides a wireless solution to the OfficeServ 100 system. It provides a cable interface between the system and WLAN Base Station (WBS24), (wireless access point). One 4WLI can be installed in a universal slot of the main cabinet and can support up to 4 WBS24s. A single 4WLI board supports up to 16 voice channels.

The main features of the 4WLI card are summarized below.

- Provides cable interface(voice and signalling data) between the Access Point(WBS24)and system
- Performs initialization to service VoIP over WLAN
- Manages information on all voice terminals and provides service only for the authorized terminals
- Initial registration service for the wireless IP phone(WIP-5000M)
- Call service for voice terminals
- Supports mobility and handover between WBS for voice terminals

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2.4 Station Equipment

All DCS Euro and iDCS (Falcon) Keysets can be used on the OfficeServ 100. In addition, a new range of Keysets, OfficeServ DS Keysets have been introduced. Also, the OS100 supports the IP handset range.

2.4.1 12 Button Large LCD IP Phone

- The DS-5012L phone is Large LCD phone
- It supports data transfer, handset call and Full-Duplex speakerphone.
- The USB Interface(shared with mobile phones) is also supported, and various features are provided through the LCD.
- The Navigation Buttons are provided along with the common buttons for convenient button control, and the phone book and recording

Figure 2.7 DS-5012L

2.4.2 14 Button 2 Line LCD Phone

- The DS-5014D phone is 2 line LCD digital phone
- It has 14 programmable buttons for the subscriber to register the features preferred.
- This phone supports handset calls and speakerphone calls
- It is equipped with the navigation button that enables you to use the phone functions(such as recently called numbers, recently received numbers, searching numbers by name, setting forwarding calls, inquiring speed buttons, and setting alarm) easily.
- KDB-D/S/F connection is also supported.

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Figure 2.8 DS-5014D

2.4.3 21 Button 2 Line LCD Phone

- The DS-5021D phone is 2 line LCD digital phone
- It has 21 programmable buttons for the subscriber to register the features preferred.
- This phone supports handset calls and speakerphone calls
- It is equipped with the navigation button that enables you to use the phone functions (such as recently called numbers, recently received numbers, searching numbers by name, setting forwarding calls, inquiring speed buttons, and setting alarm) easily.
- KDB-D/S/F connection is also supported

Figure 2.9 DS-5021D

2.4.4 12 Button Large LCD IP Phone

- The ITP-5012L phone is a Large LCD IP phone, which displays various information on the LCD screen and is equipped with 12 selectable buttons.
- The ITP-5012L phone provides voice communication through the previously installed data network line, making installation of additional telephone lines unnecessary.
- This phone is equipped with the Dial button, Volume button, and Conference button. The Transfer button used for transferring a busy call to another subscriber, the Hold button, the Speaker button for speaker calls, and the navigation button that allows you to use the phone functions easily.
- The Screen button for additional expansion function and the Scroll button for easily searching long contexts displayed on the LCD screen are also provided.
- The status indicator lets you know when a message or a call arrives, and each LED displays if the Transfer/Hold /Speaker button is pressed, and the LCD screen displays the call status and various information.

Figure 2.10 ITP-5012L

2.4.5 14 Button/21 Button 2 Line LCD IP Phone

- The ITP-5000D series phone has 14/21 programmable buttons for the subscriber to register the features preferred. Screen and is equipped with 12 selectable buttons.
- This phone is equipped with the Dial button, Volume button, and Conference button. The Transfer button used for transferring a busy call to another subscriber, the Hold button, the Speaker button for speaker calls, and the navigation button that allows you to use the phone functions easily.
- The LCD screen displays the call status and various information, and the status indicator notifies the status of the phone in the three colors of red, green, and yellow.

Figure 2.11 ITP-5014D

Figure 2.12 ITP-5021D

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2.4.6 DS-5064B (64B AOM)

- AOM is an accessory type digital station that extended the button and LED of a digital phone.
- DS-5064B is the improved model of the OfficeServ 500system 64B. Various functions preferred by you can be set on each button of DS-5064B AOM.

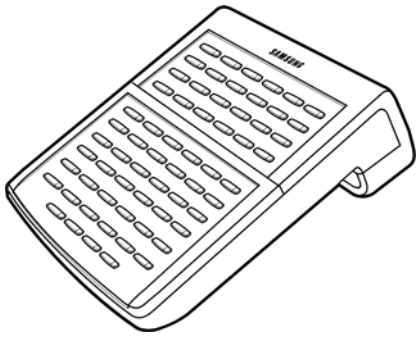

Figure 2.13 DS-5064B

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2.4.7 WIP-5000M (Mobile Phone)

- The WIP-5000M(Wireless IP phone Mobile type) mobile phone is an in-plant wireless mobile phone
- It allows voice calls through the IEEE802.11b wireless LAN.
  The WIP-5000M mobile phone serves as a wireless IP phone that transmits/receives in a packet form satisfying the wireless LAN standard(Voice over WLAN) by voice compression.
- Handover is supported when moving between AP(WBS24), and data terminals such as laptop PC can also be used in the same area.

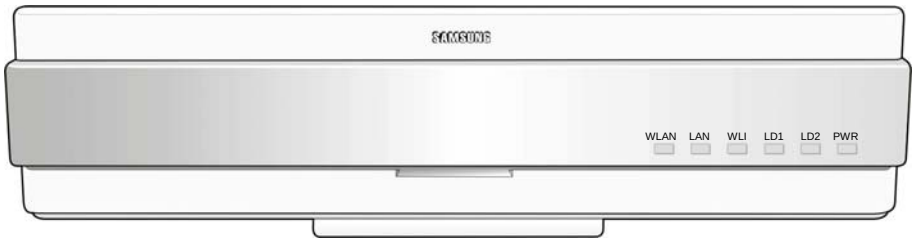

Figure 2.14 WBS24

Figure 2.15 WIP-5000M

2.4.8 Economic Keyset

- Volume Control Keys: Used to set independent levels for handset, speaker, background music, ring and page volumes.
- Transfer Key
- Redial Key
- Microphone: For hands-free operation.
- Hold Key
- Speaker Key
- Speaker: For hands-free operation and ringing.

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Figure 2.22 Economic Keyset

2.4.9 Door Phone Interface Module (DPIM) & Door Phone

- The DPIM adapts any DLI circuit for use with the door phone unit
- Commonly used to request entry through locked doors(interior or exterior) or as a room monitoring box
- Provides contact control to be used with customer-provided electric door lock
- Door phone is wall-mounted
- Door phone is weather resistant

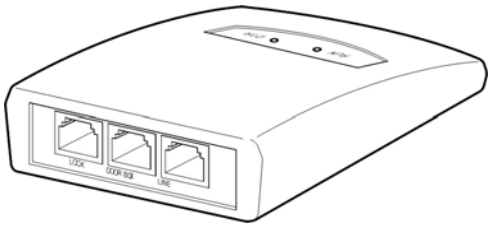

Figure 2.23 Door Phone Interface Module

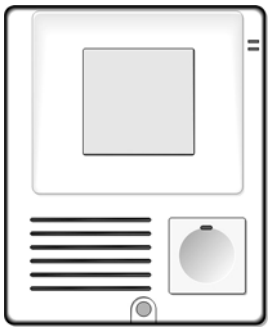

Figure 2.24 Door Phone

CHAPTER 3. Specifications

This chapter describes the technical data for the OfficeServ 100 hybrid/key telephone system as follows.

- Electrical Specifications KSU
- Interface Cards
- Station Equipment

3.1 Electrical Specifications

Table 3.1 Electrical Specifications

AC INPUT	220~240VAC, 50Hz, 3.0A
POWER CONSUMPTION(MAX)	140 WATTS MAX
DC OUTPUT	FUSE RATING 2AMP
	+5 VOLTS 4.0 AMPS MAX
	- 55 VOLTS 1.7 AMPS MAX(for SLT/KTS Feeding voltage)
	- 54 VOLTS 0.4 AMPS MAX(for Battery charge)

3.1.1 Dimensions and Weights

Table 3.2 Dimensions and Weights

	Height(mm)	Width(mm)	Depth(mm)	Weight(kg)
Basic (Single) Cabinet	464	365	148	7.5
Expansion Cabinet	464	467	148	12.5
DPIM	120	91	28	0.2
Door Phone	127	99	32	0.2
WBS24	328	80	41	0.5
WIP-5000M	43	126	19	0.1

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3.1.2 Environment

Table 3.3 Environment

Operating Temperature	32-104 °F/0-40 °C
Storage Temperature	13.1-158 °F/-10.5-70 °C
Humidity	10-90 % non-condensing

3.1.3 Cable Requirements

Table 3.4 Cable Requirements

EQUIPMENT	CABLE	AWG	MAX FEET	MAX METERS
Digital Keyset	1 PR. TWISTED	24	1300	400
Add-On Module	1 PR. TWISTED	24	1300	400
Single Line Station	1 PR. TWISTED	24	3000	1000
Door Phone	2 PR. TWISTED	24	330*	100
WBS24	2 PR. TWISTED	24	1300	400

NOTE

Cable length
This is the maximum length of the cable between the door phone and the DPIM. The DPIM can be installed up to 270 cable meters from the KSU.

3.1.4 System Tones

Table 3.5 System Tones

Tone	Frequencies	SVMi-8
Dial Tone	350 + 440 Hz	Continuous
Ring Back Tone	440 + 480 Hz	1 sec on + 3 sec off
Busy Tone	480 + 620 Hz	0.5 sec on + 0.5 sec off
DND/No More Tone	480 + 620 Hz	0.25 sec on + 0.25 sec off
Error Tone	480 + 620 Hz	0.25 sec of each tone
Confirmation Tone	350 + 440 Hz	Three bursts of tone 0.1 sec on + 0.1 sec
Transfer/CONF	350 + 440 Hz	0.1 sec on + 0.1 sec off

NOTE

The details of system tones
The details of system tones may vary according to the specifications of each country.

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3.1.5 Keyset LEDs

Table 3.6 Keyset LEDs

Condition	LED Color	LED On	LED Off
Line Idle	Off	-	Off
Line In Use	Red/Green	Steady	-
Recall	Amber	500 ms	500 ms
Call On Hold	Red/Green	500 ms	500 ms
Ringing C.O. Call	Red/Green	100 ms	100 ms
Ringing Internal Call	Green	100 ms	100 ms
DND Indication	Red	100 ms ON/100 ms OFF for 500 ms	500 ms

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CHAPTER 4. Business Feature Package

This chapter describes various features of the OfficeServ 100 system as follows.

- System Features
- Station Features
- Display Features
- Sample SMDR Printout without Caller ID
- Sample SMDR Printout with Caller ID
- Sample UCD Report
- UCD Call Statistics
- UCD Agent Statistics
- Sample Traffic Report
- Traffic Report Overview
- Sample Alarm Report
- DECT Service

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4.1 System Features

- Account Code Entry
  - Forced-Verified
  - Forced-Not Verified
  - Voluntary
- Account Code Key
- All Call Voice Page
- Attention Tone
- Authorization Codes
  - Forced
  - Voluntary
- Auto Attendant†
- Automatic Hold
- Background Music
- Cadence-Integrated Voice Mail
- Call Activity Display
- Call Costing
- Caller Identification†
  - Caller ID
  - Calling Line Identification(CLI)
- Calling ID Features
  - Name/Number Display
  - Next Call
  - Save Caller ID Number
  - Store Caller ID Number
  - Inquire Park/Hold
  - Caller ID Review List
  - Investigate
  - Abandon Call List
  - Caller ID on SMDR
  - Number to Name Translation
- Call Forwarding
  - All Calls
  - Busy
  - No Answer
  - Busy/No Answer
  - Forward DND
  - Follow Me
  - To Voice Mail
  - Preset Destination
- Call Hold
  - Exclusive
  - System
  - Remote
- Call Park and Page
- Call Pickup
  - Directed
  - Groups
- Call Waiting/Camp-On
- Centrex/PBX Use
- Chain Dialling
- Class of Service
- Common Bell Control
- Conference
  - Add On*(5 Party)*
  - Unsupervised
- Computer Telephony Integration (CTI)
  - TAPI 2.1
- Customer Set Relocation
- Data Security
- Database Printout
- Dialled Number Identification Service (DNIS)
- Direct In Lines
- Direct Inward Dialling*(DID)*
- Direct Inward System Access (DISA)
- Direct Trunk Selection
- Directory Names
- DISA Security
- Distinctive Ringing
- Door Lock Release*(Programmable)*
- Door Phones
- E & M Tie Lines E*1/Copper*
- Executive Barge-In*(Override)*
  - With Warning Tone
  - Without Warning Tone
  - Trunk Monitor or Service Observing
- External Music Interfaces
- External Page Interfaces
- Flash Key Operation
- Flexible Numbering
- Hot Line
- In Group/Out of Group
- Incoming Call Distribution
- Incoming/Outgoing Service
- Individual Line Control
- ISDN Service
  - Primary Rate Interface (PRI)
  - Basic Rate Interface (BRI)
- Least Cost Routing
- Live System Programming
  - From any Display Keyset
  - With a Personal Computer
- Meet Me Page and Answer
- Memory Protection
- Message Waiting Indications
- Microphone On/Off per Station
- Music on Hold-Flexible
- Music on Hold-Sources
- Off Premises Extensions(OPX)
- Operator Group
- Overflow
  - Operator
  - Station Group
- Override Code
- Paging
  - Internal Zones*(4)*
  - External Zones*(4)*
  - All Internal
  - All External
    - Page All
- Park Orbits
- Primeline Selection
- Private Lines
- Programmable Line Privacy
- Programmable Timers
- Recalls
- Remote Programming-PC
- Ring Modes
  - Time Based Routing-Plans
  - Automatic/Manual
  - Holiday Schedule
  - Temporary Override
- Ring Over Page
- Secretary Pooling
- Single Line Connections
- Speed Dial Numbers
  - Station List*(50 Max)*
  - System List*(500 Max)*
- Speed Dial by Directory
- Station Hunt Groups*(20)*
  - Distributed
  - Sequential
  - Unconditional
- Station Message Detail Recording (SMDR)
- System Alarms
- System Maintenance Alarms
- System Directory
- Toll Restriction
  - By Day or Night
  - By Line or Station
  - Eight Dialling Classes
  - Special Code Table
- Toll Restriction Override
- Tone or Pulse Dialling
- Traffic Reporting
- Transfer
  - Screened/Unscreened
  - Voice Mail Transfer Key
  - With Camp-On
- Trunk Groups*(11)*
- Uniform Call Distribution (UCD)†
  - UCD Groups
  - Call Statistics
  - Agent Statistics
  - Group Supervisors
  - Printed Reports
- Universal Answer
- Voice Mail-Inband Integration
- Walking Class of Service

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NOTE

Optional hardware and software
Requires optional hardware and/or software. Ask your dealer for details.

4.1.1 System Feature Descriptions

4.1.1.1 Account Code Entry

Station users may enter an account code (maximum 12 digits) before hanging up from a call. This account code will appear in the SMDR printout for that call record. Keyset users may enter this code using an account code key without interrupting a conversation. Single line telephone users must temporarily interrupt the call by hook-flashing and dialling the feature access code. Manually entered account codes can be up to 12 digits long. In some cases users can be forced to enter an account code and this account code may or may not be verified as described below.

Forced-Verified

When set for this option the user must enter an account code for all outgoing calls.
The account code entered will be verified from a system list of 500 entries. Forced Verified codes can contain the digits 0~9.

Forced-Not Verified

When set for this option the user must enter an account code for all outgoing calls, but the account code is not verified against the system list. Non verified account codes can contain the digits 0~9, and #.

Voluntary

In this case account codes are not required to make outgoing calls but may be used if desired. This is also the method used to assign an account code to incoming calls.
These account codes can contain the digits 0~9, * and #.

4.1.1.2 Account Code Key

ACC (The Account Code) button can be programmed on any phone. This button can be programmed with an extender and operates in three different ways depending on the extender as follows:

Extender=000 When programmed with an extender of 000 the ACC button will operate in the same manner as the ACCT button in the MCP-M version. That is to say the user will be prompted to enter an account code when the button is pressed.

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Extender=001~999 When programmed with an extender ranging from 001 to 999 the button will, when pressed, automatically insert the account code contained in that bin of the system account code list. This is known as One Touch account codes. This option can be denied in system programming to prevent users from bypassing the security of system account codes.

No Extender When programmed without an extender the button will, when pressed, prompt the user to enter the bin number the system account code table where the account codes are stored.

4.1.1.3 All Call Voice Page

Users can page all internal and all external paging zones at the same time by dialling the All Page code. Keysets may be restricted from making or receiving pages in system programming. A maximum of 40 keysets can be programmed in each internal page zone to receive page announcements.

4.1.1.4 Attention Tone

To get your attention, a brief tone precedes all page announcements and intercom voice calls. There are separate programmable duration timers for page and voice announce tones.

4.1.1.5 Authorization Codes

Authorization codes are used to give permission to make a call. A maximum of 250 four digit authorization codes can be either forced or voluntary for OfficeServ 100. When used, authorization codes will automatically change the dialling station's class of service to the level assigned to the authorization code. Authorization codes may be programmed to print or not print on the SMDR.

Forced

When a station is programmed for forced authorization, the user must always enter this code before dialling is allowed. The dialled authorization code is verified from the system list of 250 authorization codes on an OfficeServ 100.

Voluntary

Any station user can always enter an authorization code before they begin dialling.
The dialled authorization code is verified from a system list of 250 authorization codes for OfficeServ 100.

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4.1.1.6 Auto Attendant

The integrated digital AA (Automated Attendant) feature provides 4 AA ports on the MISC4 card for simultaneous answering and call processing. Only one MISC4 card can be installed in each system. Each of sixteen pre-recorded announcements inform callers of the progress of their calls. Several examples are the following: 'I'm sorry. There is no answer', 'That station is busy', and 'Invalid Number. Please try again'.
A maximum of four minutes of super capacitor backed (100 hours) random access memory (RAM) provide up to 48 customer recordings for announcements or greetings. Twelve individual announcements (boxes), each with its own dialling options, allow you to build call routing branches as needed. Callers are routed through the branches by dialling extension numbers or single digits. The AA card can be used in conjunction with an SVMi-4/8 card and is particularly useful for supplying a second comfort message for calls in queues.

4.1.1.7 Automatic Hold

While a keyset user is engaged on an outside (C.O.) call, pressing another trunk key, route key or CALL button automatically places the call on hold when Automatic Hold is enabled. Pressing TRSF, CONFERENCE, PAGE or a DSS key always automatically places a C.O. call on hold. Intercom calls can be automatically held only by pressing TRSF or CONFERENCE. Each keyset user can enable or disable Automatic Hold.

4.1.1.8 Background Music

Keyset users may choose to hear music through their keyset speakers when optional external sources are installed. Each user may adjust this level by the use of a volume control program at the selected keyset.

4.1.1.9 Boss/Secretary Service

Up to four secretaries can be assigned to an executive. The line designated as the executive may not be assigned as a secretary of another executive. When the executive is busy or in DND status, the call is automatically connected to the secretary.

Executive Answer Mode

In MCP1, the secretary can set the response mode for each executive. The response modes include Ring Mode, Automatic Answer, and Voice Announce.

Executive Status

The status of an executive can be set by the executive or the secretary. Other people can verify the set status through Easyset Application.

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Divert

Divert may only be set from the line designated as an executive. Press the [Divert] button in idle mode to automatically transfer all incoming calls to the secretary.
Press the [Divert] button while ringing to transfer the incoming call to the secretary.
The Divert function is operated by a toggle button.

4.1.1.10 SVMI-4/SVMi-8-Intergrated Voice Mail

The OfficeServ 100 can be equipped with Samsung's proprietary integrated voice mail and auto attendant card (SVMi Series). The card provides 2-4/4-8 ports of voice processing. Because it is built into the system it provides such feature as one touch Call Record, Answering Machine Emulation and Voice Mailbox Administration with interactive keyset displays. The SVMicard has a powerful mult-level AA function but will not provide a comfort message for calls in queues.

4.1.1.11 Call Activity Display

The OfficeServ 100 will record and buffer all calling activity within the system. With a CAD (Call Activity Display) key, the OfficeServ 100 will display a 'snapshot' of the following information:

- The maximum number of ports that have been used
- The maximum number of trunks that have been used
- The maximum number of stations that have been used
- The current number of ports in use
- The current number of trunks in use
- The current number of stations in use

4.1.1.12 Call Costing

The OfficeServ 100 provides programmable call costing tables to calculate the cost of incoming and outgoing calls. Rates are calculated by the number dialled, and may include surcharges. Display keysets can be set to show the call duration timer or the call cost.
The SMDR report will show either the call duration or the call cost depending on the station selection. One call handled by multiple callers will cost each call segment separately.

4.1.1.13 Caller Identification

The OfficeServ 100 supports two methods of identifying an incoming caller depending on the circuit type as described below.

Caller ID

On an analogue, loop start C.O. Line, calling party information is called Caller ID
A name can be attached to the telephone number of frequent callers via the CLIP translation table. For CLIP to be provided the system requires a MISC3/MISC4 card.
CLIP is also made available to SLT extensions.

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CLI (Calling Line Identification)

On ISDN circuits, calling party information is called CLI and is supported on both BRI and PRI type circuits. A name can be attached the telephone number of frequent callers via the CLIP translation table.

4.1.1.14 Caller ID Features

The following features apply to all forms of Caller Identification, however, to make them easier to read caller identification is referred to as Caller ID.

Name/Number Display

Each LCD keyset user can decide if he/she wants to see the name or number in the display. Regardless of which one is selected to be seen first, the NND key is pressed to view the other pieces of information.

Next Call

In the event that you have a call waiting or a camped-on call at your keyset, you can press the NEXT key to display the Caller ID information associated with this next call in queue at your station. Either the Caller ID name or number will show in the display depending on your selection.

Save Caller ID Number

At any time during an incoming call that provides Caller ID information, you may press the SAVE key. This saves the Caller ID number in the Save Number feature. Pressing the SAVE number redial key will dial the Caller ID number. The system must be using LCR (Least Cost Routing) to dial the saved number.

Store Caller ID Number

At any time during an incoming call that provides Caller ID information, you may press the STORE key. This saves the Caller ID number as a speed dial number in your personal speed dial list. The system must be using LCR to dial the stored number.

Inquire Park/Hold

Having been informed that an incoming call is on hold or has been parked, you may view the Caller ID information before you retrieve the call. This will influence how you choose to handle the call.

Caller ID Review List

This feature allows display keyset users to review Caller ID information for calls sent to their stations. This list can be from ten to fifty calls in a first in, first out basis. The list includes calls that you answered and calls that rang your station but that you did not answer. When reviewing this list, you can press one button to dial the person back. The system must be using LCR to dial the stored number.

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There is an added option called CID REVW ALL in the User ON/OFF options. When set to ON the feature will operate the same as described above. However, when set to OFF only calls that are not answered (missed calls) at the station will be recorded in the Review list.

Investigate

This feature allows selected stations with a special class of service to investigate any call in progress. If Caller ID information is available for an incoming call, you will know to whom this station user is speaking. On outgoing calls, you can see who was called.
After investigating, you may barge-in on the conversation, disconnect the call or hang up.

Abandon Call List

The system has a system-wide abandon call list that stores Caller ID information for calls that rang but were not answered. The list is accessed using the administrator's passcode. When reviewing this list, you are provided options to CLEAR the entry or DIAL the number. You can see the NND key to toggle between the Caller ID name, number and the date and time the call came in. The system must be using LCR to dial numbers from the abandon call list. The abandoned call list will store up to 50 unanswered calls on OfficeServ 100.

Caller ID on SMDR

The Station Message Detail Records report can be set to include Caller ID name and Caller ID number for incoming calls. This format expands the printout to 113 characters.
Use a wide carriage printer or an 80 column printer set for condensed print.

Number to Name Translation

The system provides a translation table for 500 entries on OfficeServ 100. When the Caller ID number is received, the table is searched. When a match is found, the system will display the corresponding name.

4.1.1.15 Call Forwarding

This feature allows the user to redirect (forward) incoming calls. The calls can be redirected to the attendant, a hunt group, voice mail, external number or another station user. If the destination station is in DND (Do Not Disturb), the calling party will receive DND/Reorder tone. Calls cannot be forwarded to a door phone. In OfficeServ 100 system, the external number can be set to the forward destination for all kinds of forwarding. So External, CFB, CFNR and CFU option is removed. When the destination is an external number, the ICM EXT FWD option must be set to ON.

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All Calls

This type of forwarding is not affected by the condition of the station. All calls are immediately redirected to the designated destination. If desired, the destination station may redirect the call back to the forwarded station by using the transfer feature. The forwarded station user can continue to originate calls as usual. If no key is programmed as Forward All, the TRSF key lights steady when a Forward All condition is set.

Busy

This feature forwards all calls only when the station set is busy. The station user can originate calls as usual.

No Answer

This feature forwards calls that are not answered within a preprogrammed time. The user can originate calls as usual and receive call if present. The timer is programmable on a per-station basis to allow for differences in individual work habits.

Busy/No Answer

This feature allows the station user to use both types of forwarding simultaneously, provided the destinations have already been entered in the usual manner.

Forward DND

This feature works with the Do Not Disturb feature. This allows calls directed to a station in Do Not Disturb or One Time Do Not Disturb to forward immediately to another destination.

Follow Me

This feature allows the user to forward all calls from another station to the user’s station or change the forward destination to the user’s current location.

To Voice Mail

Each station may be programmed to allow or deny the ability to forward intercom calls to voice mail. When denied, valuable message time in the voice mail system can be saved.

Preset Destination

If desired this feature provides for a permanent (preset) forward no answer destination for each extension. It can only be programmed by the system technician or system administrator. When any station does not have FWD/NO-ANSWER set, the call will ring this preset destination if one is programmed.

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4.1.1.16 Call Hold (Exclusive)

Outside calls can be placed on exclusive hold at any keyset by pressing HOLD twice during a call. Calls placed on exclusive hold can only be retrieved at the keyset that placed the call on hold. Intercom calls are always placed on exclusive hold.

4.1.1.17 Call Hold (System)

Outside calls can be placed on system hold at any station. Users may dial the access code or press the HOLD button. Calls on system hold may be retrieved at any station.

4.1.1.18 Call Hold (Remote)

Outside calls can be placed on hold at a remote station. This feature allows calls to be answered at one keyset and placed on hold at another station. This allows time for the user to proceed to that station or allows the party that the call was intended for to have that call placed at their station. The call or trunk button will flash at the remote hold station.

NOTE

Intercom calls
Intercom calls cannot be remote held.

4.1.1.19 Call Park and Page

Each C.O. line has its own park zone. This simple method eliminates confusion and ensures that a park zone is always available. Pressing the PAGE key parks the call automatically. There are no extra buttons to press and there is no lost time looking for a free zone.

4.1.1.20 Call Pickup

Directed

With directed call pickup, users can answer calls ringing at any station by dialling a code plus that station’s extension number or by pressing the feature button and then dialling the extension.

Groups

In addition, calls can be picked up from a station group in a similar manner. The group pickup feature allows users to answer any call ringing within any pickup group. There are 20 pickup groups available on OfficeServ 100. A station cannot be in more than one pickup group. To use this feature, station users either dial the access code or press the assigned feature button followed by the pickup group number.

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4.1.1.21 Call Waiting/Camp-On

Busy stations are notified that a call is waiting(camped-on) when they receive a tone. The tone is repeated at a programmable interval. Keysets receive an off-hook ring signal through the speaker and single line stations receive a tone in the handset. The volume of the camp-on tone can be set by the station user. Camped-on calls follow Forward No Answer if a Forward No Answer destination has been set.

Optionally any station can be programmed to automatically camp-on to a busy station instead of having to press the camp-on button or dial a camp-on code.

4.1.1.22 Centrex/PBX Use

CENTREX and PBX lines can be installed in lieu of central office trunks. CENTREX and PBX feature access codes including the command for hook-flash(FLASH) can be stored under one touch buttons. Toll restriction programming can ignore PBX or CENTREX access codes so that toll calls can be controlled when using these services.

4.1.1.23 Chain Dialling

Keyset users may manually dial additional digits following a speed dial call or chain together as many speed dial numbers as are required.

4.1.1.24 Class of Service

The system allows a maximum of 30 station classes of service. Each class of service can be customized in memory to allow or deny access to features and to define a station’s dialling class. Each station can be assigned different classes of service for day and night operation.

4.1.1.25 Common Bell Control

The MISC card provides relays that may be programmed to control a customer-provided common bell or common audible device. These contacts must be programmed as members of a station group and may provide steady or interrupted closure.

4.1.1.26 Conference

The system allows six simultaneous conferences up to 5 parties each.

Add-On (5 PARTY)

Any combination of up to five parties(stations or outside lines) can be joined together in an add-on conference. Parties may be eliminated or added after a conference has been established.

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Unsupervise

A station user may set up a conference with two or more outside lines and then exit the conference leaving the outside lines connected in an unsupervised(trunk to trunk) conference.

Split

A phone user can ‘split’ a conference into separate outside calls, then speak with each caller privately. Then the Individual calls can be conferenced again in any combination.

NOTE

Split
This feature requires individual trunk buttons and auto-hold must be enabled.

4.1.1.27 CTI (Computer Telephony Integration)

CTI allows integration between the OfficeServ 100 and a personal computer system or a LAN (Local Area Network). Caller ID service is required for TAPI inbound call applications that use the CID information to display computer records in conjunction with the presentation of the call to the station on the OfficeServ 100.

TAPI 2.1

TAPI 2.1 is the method of integrating the OfficeServ 100 system to a computer. TAPI 2.1 is a LAN based solution allowing computers to communicate directly to the telephone system over the network system. This establishes a logical connection rather than a physical connection between telephone and computer. It eliminates the cost and administrative overhead of connecting every PC to a desktop phone. It emphasizes third-party call control. (Example: calls can be tracked as they are transferred, making it more suited to large office applications). TAPI 2.1 can emulate first-party type call control for the OfficeServ 100 system, rather than from the telephone as TAPI 2.0 does. For example, to make a call the OfficeServ 100, rather than the telephone would dial the phone number, and the call would be then transferred to the telephone.

4.1.1.28 Customer Set Relocation (Hot Desking)

Customer Set Relocation allows the customer to exchange or swap similar stations in the OfficeServ 100 without wiring changes. All individual station assignments such as trunk ring, station group, station COS, station speed dial, button appearances, call forwarding, etc. will follow the Customer Set Relocation program.

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4.1.1.29 Data Security

Single line extensions used with modems and facsimile machines can be programmed so that they will not receive any system-generated tones that would disrupt data transmissions. In addition, these devices receive DCS C.O. ringing pattern instead of intercom ring pattern. Devices connected to an SLI card receive a disconnect signal upon termination.

4.1.1.30 Database Printout

A copy of the customer database can be obtained by using PCMMC. This information can be directed to a printer or the PC screen and may be done either on-site or remotely.
A complete database or specific data blocks may be obtained.

4.1.1.31 DECT Service

The OfficeServ 100 system provides DECT cordless communications in a single office or throughout a large commercial or industrial complex. A 3 port card can be installed on an OS100.

4.1.1.32 DNIS (Dialled Number Identification Service)

When DNIS service is provided on an incoming trunk the OfficeServ 100 can route calls based on the numbers received.

4.1.1.33 Direct in Lines

Outside lines may be programmed to bypass the operator(s) and ring directly at any station or group of stations.

4.1.1.34 DDI (Direct Inward Dialling)

When using ISDN trunks are used direct indial to extensions is available.

4.1.1.35 DISA (Direct Inward System Access)

Users can call in on specific DISA lines at any time, input a security code and receive system dial tone. Users can now place internal calls or if permitted, calls using C.O. lines. The caller must have a tone dial phone and know his/her DISA security code. DISA lines can be used as both way lines or incoming only and may be active in day mode, night mode or both. The C.O. lines used for DISA must have disconnect supervision.

4.1.1.36 Direct Trunk Selection

Each station can be allowed access to or denied access from a trunk or trunk group by access code when LCR is activated. When restricted, the station user must use a trunk key or a route key.

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4.1.1.37 Directory Names

Each station, station group and C.O. line may be assigned a directory name (maximum 11 characters). In addition, each personal speed dial number, system speed dial number and entry in the DDI translation table may be assigned a name (maximum 11 characters). These names are displayed during calls with these ports and in the case of station and speed dial names, can be used to originate calls. See the Dial by Name feature (Station Features).

4.1.1.38 DISA Security

Telephone fraud and long distance theft are a serious concern. The OfficeServ 100 provides a strong DISA security system. If an incorrect DISA passcode is entered repeatedly(as is the case with 'hackers'), the DISA system can be automatically disabled temporarily. Both the number of incorrect passcode attempts and the time that DISA is disabled are programmable. In addition, all failed attempts to access DISA print on SMDR(if provided) with a 'DE' DISA error flag.

4.1.1.39 Distinctive Ringing

A user knows the type of call received by the type of ring heard. Outside calls have a single ring repeated while internal calls have a double ring repeated.

In addition any trunk or station can be programmed to ring a keyset with a predefined ring tone (1-8). This provides for easy identification of special lines or extensions that ring your phone.

4.1.1.40 Door Lock Release (Programmable)

After answering a call from the door phone, users can dial a code to activate a contact closure. This can be used to operate a customer-provided electric door lock release mechanism. The contact closure timer is programmable from 100-2500 ms.

4.1.1.41 Door Phones

The DPIM provides for connection of a door phone to a DLI port. Pressing the button on the door phone produces a distinctive ring(three short rings repeated) at the assigned station or station group. If not answered within a programmable time, the system releases the door phone and stops the ringing. Stations may call the door phone directly and monitor the surrounding areas. Door phones follow the system ring mode plan.

4.1.1.42 Easyset Interface

The Easyset Application is used to set the buttons and functions of the digital/IP phone through a PC.
Convenient features such as the SMS (Short Message Service) and diary are available in the Easyset Application.

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4.1.1.43 E & M Tie Lines (E1/Copper)

Your office can be connected to another office with a tie line. Use it to make calls to stations in the other system. If programming allows, you can access lines in the other system to make outside calls. Tie line calls can be put on hold, transferred and conferenced in the same way as are other outside calls. Users accessing the tie line from the other system can get a line in your system and make outgoing calls. These calls can be controlled by assigning a dialling class to the tie line.

4.1.1.44 Executive Barge-in (Override)

The feature allows specially programmed stations with a barge-in key to override the automatic privacy of another station or outside trunk. Programming allows barge-in with or without a warning tone. Stations may also be programmed as ‘secure’ so that they cannot be barged-in on.

With Warning Tone

When the barge-in with tone option is set, the barging-in keyset has its microphone on and the barged-in on station receives an override display. A double burst of warning tone sounds and repeats every ten seconds. This feature does not work from single line sets.

Without Warning Tone

When the barge-in without tone option is set, the barging-in keyset has its microphone muted and the barged-in on station does not receive an override display. This feature does not work from single line sets.

Trunk Monitor or Service Observing

This feature allows the user who barged-in to retain the trunk call after the original station has hung up.

4.1.1.45 External Music Interfaces

The OfficeServ 100 system provides up to two inputs for connecting to customer provided external music sources. One is located on OfficeServ 100 base board which is selectable using internal music source or external music source by shunt pin setting. Another is located on the MISC card.
These sources can be used to provide background music, or any of the varied MOH(Music On Hold) uses.

4.1.1.46 External Page Interfaces

The OfficeServ 100 base board provides one external page output and the OfficeServ 100 MISC card provides an additional external page output and three relays which can be used to control the page zone control. Multiple relays may be assigned to each zone.

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4.1.1.47 Flash Key Operation

While a user is on an outside line, pressing the FLASH key will flash the central office or PBX. This is used for custom calling features on C.O. lines or in conjunction with CENTREX/PBX operation. System programming allows individual flash times for C.O. and PBX lines. When C.O. or PBX flash is not required, setting the timers for two seconds releases the existing call and returns dial tone to make a new call.

4.1.1.48 Flexible Numbering

System programming allows stations to have two, three or four digit extension numbers beginning with the digit 2 or 3. Default extension numbers begin with 201. Station group numbers can be two or three digits beginning with the digit 5.

Using digits other than 2, 3 or 5 will require the technician to change other feature access codes in the system default numbering plan. User guides will need to be modified as these are all written using the OfficeServ 100 default numbering plan.

4.1.1.49 Hot Line

Stations can be programmed to call a pre-defined station or station group whenever that station goes off-hook. A hot line delay timer of 0-250 seconds can be programmed to allow sufficient time to make a different call.

4.1.1.50 Group Conference

The GCONF button is used to automatically call the preset number and include the person into the conference when he or she answers the call. This function may only be used for preset extensions, and up to five conference groups can be assigned to an extension. Up to five persons, including the user may be assigned to a conference group. The Trunk line, which can identify if the other party answers the call, shall be used to ensure normal service when calling external numbers.

4.1.1.51 In Group/Out of Group

Individuals assigned to a station hunt group may temporarily remove their telephones from the group by pressing the In/Out of Group button providing that there is someone still in the group.
The OfficeServ 100 system has a system wide option to allow all members to log out of a station group. Stations out of a group will not receive calls to that group but will continue to receive calls to their individual extension numbers. When desired, the user may put him/herself back into the group by pressing the button again. Users who do not have this button may dial the access code and the group desired. A station user is allowed to be in several groups, providing a key and the extender of that group are assigned for each group on the user’s phone.

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4.1.1.52 Incoming Call Distribution

Incoming calls can be assigned to ring a distributed station hunt group. This allows all members of the group to share the call load.

4.1.1.53 Incoming/Outgoing Service

Outside lines are available for incoming or outgoing service. Programming allows any outside line to be used for incoming calls only, outgoing calls only or both way service.

4.1.1.54 Individual Line Control

Each station in the system can be individually programmed to allow or deny dialling out as well as allow or deny answering for each outside line.

4.1.1.55 IP Phone Interface

Up to 3 MGI (Media Gateway Interface) cards can be installed in the OS100 – these must be installed in the main cabinet. Only one type of MGI card is available - MGI3 – this offers the same functionality, including fax, as the OS500 MGI3 card but it is physically different. 8 channels are available on the basic card and a further 8 channels can be added by the installation of the OS500MGI3 daughter board. 80 IP phones can be connected to the OS100.

4.1.1.56 ISDN Service

PRI (Primary Rate Interface)

The OfficeServ 100 supports Primary Rate Interface ISDN. PRI allows simultaneous data calls, calling party and calling line identification, high speed call setup and disconnect are among the benefits of ISDN calling. The 30+D configuration of ISDN allows call information to be delivered via the data channel(the ‘D’ of 30B+D) thus leaving the bearer channels(the ‘B’ of 30B+D) available for single use or combined use to provide a wider bandwidth for data and video.

BRI (Basic Rate Interface)

The OfficeServ 100 BRI card supports trunk or station level BRI .Trunk or station BRI use is software programmable. BRI allows simultaneous data calls, called party and calling number identification, high speed call setup and disconnect are among the benefits of ISDN calling. The 2B+D configuration of ISDN allows call information to be delivered via the data channel(the ‘D’ of 2B+D) thus leaving the bearer channels(the ‘B’ of 2B+D) available for single use or combined use to provide a wider bandwidth for data and video.

4.1.1.57 Large LCD Phone Interface

The Large LCD phone is supported by the OS100. The wide LCD screen of the Large LCD phone provides various features such as Virtual AOM, phone Book, LCD Navigation similar to that of a mobile phone, and Enblock Dialling.

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4.1.1.58 Least Cost Routing

LCR (Least Cost Routing) is the ability to automatically select the most cost effective central office route for the outside number dialled by any station. The OfficeServ 100 LCR program includes the following features:

- Option to use or not use LCR or a tenant basis
- Programmable LCR access code
- Digit analysis table 500 entries each with ten digits for an OfficeServ 100
- Routing by time of day and day of week(4 time bands per day)
- Routing according to individual station class
- Modify digits table 100 entries for an OfficeServ 100.
- Flexible trunk group advance timer
- Option to use or not use trunk group advance warning tones

4.1.1.59 Live System Programming

The system can be programmed from any display keyset or personal computer without interrupting normal system operation. There are three levels of programming: technician, customer and station. The technician level has access to all programs and can allow the customer access to system programs as needed. Technician and customer access are controlled by different security passcodes. Programming from a PC requires the PCMMC program.

4.1.1.60 Meet Me Page and Answer

After a user makes a Meet Me Page, the user may remain off-hook to allow the paged party to meet the user for a private conversation.

4.1.1.61 Memory Protection

In the event that power is lost to the system, all customer data contained in memory is retained by the use of a ‘super capacitor’ for approximately 7 days. In addition, the PCMMC computer program may be used to produce a backup copy of the customer data. Additionally, the Smart Media card may be used to store the system database.

4.1.1.62 Message Waiting Indications

When calling a station and receiving a busy signal or the no answer condition, the caller can leave an indication that a message is waiting. The message button will flash red at the messaged keyset.
A single line phone will receive a distinctive message waiting dial tone. Five message waiting indications can be left at any station.

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4.1.1.63 MicroPhone On/Off Per Station

The microphone can be disabled at any keyset. When the microphone is disabled, the keyset cannot use the speakerphone, although on-hook dialling and group listening are still possible.

4.1.1.64 Music on Hold-Flexible

The OfficeServ 100 allows its music sources to be used in a very flexible manner as follows:

- Each keyset can have a designated music source for playing as BGM (Background Music) through the keyset speaker.
- Each Station can have a designated music source for playing to callers placed on Exclusive hold at that station.
- Each Trunk can have a designated music source for playing to callers placed on hold. This setting is overridden by some of the other settings such as station music on hold, and UCD MOH.
- Each UCD group can have a designated music source to be played while a caller is in queue.

4.1.1.65 Music on Hold-Sources

The OfficeServ 100 provides for up to six different types of Music on Hold source including silence or 'NONE' as listed below:

- **None**: No audio is played to the listener
- **Tone**: A tone or 'beep' is repeated at a programmable interval
- **Chime**: A music chime source located on the Base board is played to the listener.
- **External source**: An external source connected to a MISC card, such as a digital announcer or radio, is played to the listener.
- **Digital Announcement on AA card:** If the system is equipped with an AA card the last port of this card can be flagged as a MOH source and used to repeatedly play a message recorded on the AA card to the listener.
- **Voicemail Sound File**: If the OfficeServ 100 system has an optional SVMI-8/SVMi-4 card installed, up to 100 custom recorded sound files from the Voice Mail card can be used for MOH sources. For information on creating the sound files see the SVMI-4/8 System Administrator Manual-Recording greeting by number. If you select this option be advised that each VMMOH source requires a dedicated SVMI-4/8 port/channel.

4.1.1.66 Networking (PRI/Q-SIG)

The OfficeServ 100 networking feature package allows an OfficeServ 100 system to be connected together with some basic feature transparency. The physical connection between the systems is via a proprietary PRI connection (TEPRI card must be used) and is based on the Q-SIG specification. The following features are supported between two networked systems.

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CCBS(Call Completion, Busy Station)
also known as Callback or Busy Station Callback. When a station in one system calls a station in another system across the network link and the destination station is busy the calling station can set a Callback to the busy station. When the busy station becomes idle the system will notify the callback originating station by ringing that station and when the originating station answers, the system will call the destination station.

CCNR(Call Completion, No Response)
also known as Callback or No Answer Callback. When a station in one system calls a station in another system across the network link and the destination station does not answer the calling station can set a Callback to the called station. When that station indicates the user is present by becoming busy then idle the system will notify the callback originating station by ringing that station and when the originating station answers, the system will call the destination station.

CFB(Call Forward Busy)
This is a different feature from the normal call forward busy and is only used when the forward destination is in a different node of the network.
The operation of the feature is the same as the normal forward busy where when the forwarded station is busy a calling station will be forwarded to the forward destination.

CFNR(Call Forward No Response)
This is a different feature from the normal call forward no answer and is only used when the forward destination is in a different node of the network. The operation of the feature is the same as the normal forward no answer where when the forwarded station does not answer after a programmed amount of time a calling station will be forwarded to the forward destination.

CFU(Call Forward Unconditional)
This is a different feature from the normal call forward all and is only used when the forward destination is in a different node of the network. The operation of the feature is the same as the normal forward all where all calls to the forwarded station will be forwarded to the forward destination.

Forward External
This feature operates in the same manner as a non networked system with the exception that, because calls across a network link are trunk calls, network calls do not follow the ICM FWD EXT ON/OFF setting in MMC 210. It is therefore suggested that this setting be set to ON in a networked switch to avoid confusion in operation between networked and non networked calls.

Call Intrusion(Barge In)
This feature operates in the same manner as in a non networked switch.

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Call Offer/Call Waiting(Camp On)
This feature operates in the same manner as in a non networked switch. When a called station is busy the caller can press a camp on key and appear as a ringing call on the second call button. The Auto camp on feature will not work on calls across a network link if set to ON in MMC 110.

Call Transfer
Calls answered in one network node can be transferred to a station or station group in another network node.

Transfer Retrieve
Calls on Transfer Hold during a screened transfer can be retrieved by pressing the call button for that call.

Transfer Recall
Calls transferred across a network link will recall to the transferring station after the originating systems transfer recall timer expires. After recalling, if not answered prior to that systems attendant recall timer expiring, the call will recall to that systems designated operator group. Attendant recalls will not recall to a 'Centralized Attendant'.

DID with Pass Through
Incoming DID, DNIS or DDI calls can be routed through one switch across a network link to be processed by the DID table of the destination switch.

DND(Do Not Disturb)
This feature operates in the same manner as in a non networked switch. There is an option in MMC 823 to determine the type of DND tone sent across the network link.

Caller ID
Caller ID in its various forms that are currently available(Analogue CID Name and Number, ANI Number, PRI Name and Number and BRI number) will be transported across the network link with the original call.

Centralized Attendant
This feature basically allows a user in any switch to dial '0' and ring at the designated Central attendant group. Each system on the network requires its own designated attendant group for local usage, recalls and the like.

Intercom Calling/Uniform dialling plan
Station to station and station to group calls can be made across the network link without having to dial an access code for a call within the network. LCR can also be programmed to route calls across a network link to access local trunks in another networked system.

Centralized Voice Mail with Message Waiting Lights
This feature will only operate with SVMi-8 and/or SVMi voicemail systems only. Users in one node can call forward(CFNR, CFB & CFU) to the SVMi-8 group in a different switch

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and messages left in that switch will be indicated on the VMSG key in the origination switch. Messages can be returned to the SVMi-8 or SVMi voice mail system.

4.1.1.67 OPX (Off Premises Extensions)

A single line(tip and ring) extension from an 4SLI card may be connected to telephone company-provided OPX circuits to remote locations. 8SLI cards and KDB-SLIs do not support off premises extensions.

4.1.1.68 Operator Group

The operator group can contain 32 stations to answer incoming calls. Calls to this group can be set for distributed, sequential or unconditional ringing. Operators can use the In/Out of Group feature to meet flexible operator requirements. Operator groups are selectable per ring plan.

4.1.1.69 Overflow

Operator

When calls ringing a operator group go unanswered, they can overflow to another destination after a programmed period of time. The operator group has its own timer. The overflow destination can be a station or station group.

Station Group

When calls ringing a station group go unanswered, they can overflow to another destination after a programmed period of time. Each station group has its own timer. The overflow destination can be a station or station group.

4.1.1.70 Override Code

This feature allows users to make emergency outside calls from a station that has a forced code such as Account code or authorization code enabled but without requiring them to enter a forced code. The basis of this feature is an override code table containing 8 entries of up to 14 digits each. The OfficeServ 100 will examine digits that are dialled from a station to see if they match any entry in the Emergency Number table. If the digits match the table, the system will process the call without requiring a forced code.

4.1.1.71 Paging

System software allows the use of four internal and four external paging zones. Stations can page any individual zone, all internal zones, all external zones or all zones simultaneously. Using system programming, each station may be allowed or denied the abilities to make and/or receive page announcements to any zone or combination of zones.

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4.1.1.72 Park Orbits

The system has 10 park orbits(0-9). These orbits can be used to park calls prior to paging and allows the call to be retrieved by dialling a park code plus the orbit number.
Calls parked in this manner can also be retrieved by dialling the park pickup code 10 plus the station or trunk number. This feature is in addition to Call Park and Page.

4.1.1.73 Prime Line Selection

Any station can be programmed to select a specific line, trunk group, telephone number, station or station group when the handset is lifted or the speaker key is pressed(same as Hot Line feature).

4.1.1.74 Private Lines

For private line use, stations can be prevented from dialling and/or answering any line.

4.1.1.75 Programmable Line Privacy

Each outside line can be programmed to ignore the automatic line privacy. This allows up to four other parties to join your conversation by simply pressing the line button.
This is similar to 1A2 key telephone operation.

4.1.1.76 Programmable Timers

There are over 50 programmable system timers to allow each installation to be customized to best fit the end user's application.

4.1.1.77 Programmed Message Service

Programmed Messages can be set on each extension. The Programmed Messages are displayed on the LCD screen when call arrives from another extension. 15 messages are set at the system level and 5 messages are set separately for each extension.

4.1.1.78 Recalls

Calls put on hold, transferred or camped-on to any station will recall to the originating station if not answered within a programmable time. A recall that goes unanswered for the duration of the attendant recall timer will recall to the system operator group. Hold, transfer, camp-on and attendant recalls have individual programmable timers. Calls recalling to buttons with tri-colored LEDs will flash amber.

4.1.1.79 Remote Programming-PC

Remote programming allows the technician to access the system database from a remote location for the purpose of making changes to the customer data. Customer-provided modems and a PC using an optional software package will be needed to implement this feature.

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4.1.1.80 Ring Modes

Time Based Routing- Plans

Each C.O. line can be programmed to ring at any station or station group. Each line can be assigned a ring destination based on six different ring plans based on time of day and the day of the week.

Automatic/Manual

Ring destinations will automatically change based on time of day and day of week. At any time the system can be manually forced into a specific ring plan. It will remain in this ring plan until manually taken out.

Holiday Schedule

The system has a table of 60 dates that are used to define holidays. On a date designed as a holiday the system will remain in a ring plan for that calendar day providing the system was already in night service. This feature will override the ring plan time table.

Temporary Override

At any time the system can be forced into a specific ring plan for a temporary period of time until the next scheduled ring plan automatically takes effect.

4.1.1.81 Ring Over Page

Any outside line can be programmed to ring over a customer-provided paging system. Outside lines, door phones and station groups may ring over page in the system ring plan mode.

4.1.1.82 Secretary Pooling

Each keyset may be defined as an executive (BOSS in programming) or a secretary(SEC in programming) in system programming. Each executive can have up to four secretaries and each secretary can have up to four executives. These arrangements are known as executive/secretary pools. There can be multiple pools in a system. When an executive is in DND, all calls to the executive ring the first secretary assigned to that executive; if that secretary is busy, the call hunt to the next available secretary assigned to that executive.
If the secretary must communicate with the executive while he/she is in DND, pressing the corresponding executive button on the secretary's keyset results in an Auto Answer intercom call being made to the executive(providing the executive is free). The OfficeServ 100 has a system wide option to allow the stations to ring rather than auto announce the executive secretary calls. A station can only be the executive of one secretary pool.
In addition, a station cannot be in more than one pool.

4.1.1.83 Single Line Connections

Single line ports allow connection of a variety of single line telephones plus facsimile machines, answering machines, loud bells, computer modems, cordless phones and credit

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card machines. When connecting customer-provided equipment to these extensions, compatibility should be checked out before purchase to ensure correct operation. Central office ring SVMi-8 can be selected for SLT stations. This is helpful when optional devices cannot detect OfficeServ 100 intercom ring SVMi-8.

4.1.1.84 Speed Dial Numbers

A library of 1500 speed dial numbers may be allocated as needed for OfficeServ 100. The system list can have up to 500 numbers(950 numbers when SYSTEM SPEED BIN is set to MAX950) and each station can have up to 50 numbers. Speed dial numbers are assigned in blocks of ten. Each speed dial number may contain up to 24 digits.

4.1.1.85 Speed Dial by Directory

The OfficeServ 100 system provides the user with the ability to look up a speed dial number and place the call. There are three speed dial selections: personal, system and station. This feature requires a display keyset.

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4.1.1.86 Spot View Interface

Spot Call Plus

The caller information is displayed on the LCD screen of the phone and the user's PC screen.

Spot News

Information from the Internet and internal information are displayed on the LCD screen in text.

Spot Choice

Information services on stock, fortune, bio-rhythm, etc are displayed upon the user's choice.

4.1.1.87 Station Hunt Groups

System programming allows up to 20 station hunt groups on an OfficeServ 100. One of three ring patterns-sequential, distributed and unconditional-is available for each group.
Each unconditional group may contain a maximum of 32 stations and each sequential and distributed group may contain a maximum of 32 stations. A station may be assigned to more than one group. Each station group has its own recall timer for calls transferred to that group.

4.1.1.88 SMDR (Station Message Detail Recording)

The system provides records of calls made, received and transferred. Connecting a customer-provided printer or call accounting system will allow collection of these records. Each call record provides the following details: station number, outside line number, start date, start time, duration of call, digits dialled (maximum 18) and an account code if entered. The system may print a header followed by 50 call records per page or send continuous records with no header for use with a call accounting machine. See the sample printouts.

The SMDR format contains many options that allow it to be customized for a company's individual needs. Options to print include incoming calls, outgoing calls, in and out of group status, change in DND status and authorization codes.

4.1.1.89 System Alarms

A DISA alarm will warn the customer if the DISA security system has been triggered by too many incorrect password attempts. The alarm can ring any station or group of stations and show an appropriate display at the assigned stations.

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4.1.1.90 System Maintenance Alarms

The OfficeServ 100 continuously performs internal system diagnostics. When either a major or minor fault is detected the system can ring stations with an ALARM KEY assigned. The keyset display shows information that includes the description, location and date and time stamp for each alarm.
A log of 100 alarms are stored in a buffer and can be reviewed at a display keyset or sent to a printer(see '4.11 Sample Alarm Report' section of this document).

4.1.1.91 System Directory

Each station, station group and outside line can have an 11 character directory name. This name will appear on keyset displays to provide additional information about lines and stations.

4.1.1.92 Text Message Service

When a caller presses the CAMP-ON button on a busy line, the receiving party can press the TMSG button to send a preset text message to the caller. The Text Message function shall be enabled on both extensions. Text Messages can be set respectively for each extension in OfficeServ 100 system.

4.1.1.93 Toll Restriction

There are 250 allow and 250 deny entries of 11 digits each. Each of these entries can apply to dialling classes B, C, D, E, F and G. Expensive 976, 1-900, 411 and operator-assisted calls, as well as specific area and office codes, can be allowed or denied on a per-class basis. Class A stations have no dialling restrictions and Class H stations cannot make outside calls.

Any outside line may be programmed to follow station toll restriction or follow the toll restriction class assigned to it. Each station and trunk can have a day dialling class and a night dialling class.

Special Code Table

A Special Code Table of ten entries(four digits each) allows use of telephone company features such as CID blocking(*67) or call waiting disable(*70) without interference to toll restriction or LCR. The Special Code table allows use of these custom calling features on a per call basis.

4.1.1.94 Toll Restriction Override

Program options allow system speed dial numbers to follow or bypass a station's toll restriction class. In addition, users may make calls from a toll restricted station by using the walking class of service or authorization code feature.

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4.1.1.95 Tone or Pulse Dialling

Outside lines can be programmed for either tone or pulse dialling to meet local telephone company requirements.

4.1.1.96 Traffic Reporting

The OfficeServ 100 system can store peg counts for various types of calls. These peg counts can be printed on-demand, daily, hourly, or up to three separate programmable shifts. The report includes statistics for each trunk, trunk group, station, station groups and page announcements. For more details and explanations see sections ‘4.9 Sample Traffic Report’ and ‘4.10 Traffic Report Overview’ of this document.

4.1.1.97 Transfer

System operation permits station users to transfer calls to other stations in the system. Transfers can be screened, unscreened or camped-on to a busy station.

4.1.1.98 Trunk Groups

Outside lines can be grouped for easy access by dialling a code or pressing a button. There are 11 trunk groups available for OfficeServ 100.

4.1.1.99 UCD (Uniform Call Distribution)

UCD is used whenever the user expects to have more ringing calls than people to answer them. It prevents callers from receiving busy signals or lengthy delays before answering. Callers reaching a busy station group are held in queue for an available agent. First and second announcements reassure the caller until an agent becomes free (requires MISC4). Programmable automatic logout removes a station from the group if a call is placed to an unattended station, thus preventing unanswered calls. A wrap-up timer prevents calls to a station for a programmable period of time to allow the agent to finish up work associated with the call.

UCD Groups

The UCD group option allows callers in queue at a UCD group to be temporarily diverted to an announcement device and then placed back in the queue. A wrap-up timer will allow agents to complete paperwork before receiving the next UCD call.

Call Statistics

UCD supervisor positions using a display keyset can monitor the number of calls in queue, the time that the oldest caller has been waiting, the total number of calls received for the current day and the average time a caller waits to be answered.

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Agent Statistics

UCD supervisor positions using a display keyset can monitor the number of agents in a group and how many agents are currently logged in. Each station's status can be reviewed for the number of calls answered and the average call length of the current day.

Group Supervisors

Multiple supervisors can be assigned to each group or one station can be given supervisor status for multiple groups. The group supervisor(using a display keyset) can add and delete agents in real time from the group to handle the workload.

Printed Reports

Agent supervisors may run printed reports to a customer-provided printer, showing the data available on the supervisor displays.

4.1.1.100 Universal Answer

Station users may dial the Universal Answer code or press the UA key to answer any outside lines programmed to ring the UA device. The UA device can be a station, group of stations, common bell or ring over page.

4.1.1.101 Virtual Ports

The OfficeServ 100 provides both SLI and DLI Virtual Ports (total of 32, able to be flexibly re-assigned between SLT and DLI) . Virtual Ports are not connected to a physical cable, but have their own phone numbers and functional settings. Virtual Port can be used as the parameter port for call transfer in CTI Applications such as the ICC (Internet Call Center), and can exchange saved information with real phones using the Set Relocation feature to implement a Mobile Office (Hot Desking). Both SLT Line Type Virtual Port and the Digital Line Type Virtual Ports are provided in the OfficeServ 100 system.

4.1.1.102 Voice Mail-Inband Integration

The OfficeServ 100 system uses DTMF tones(inband signalling) to communicate with any compatible voice mail system. Stations can call forward to a voice mail system.
When answered, the system will send DTMF tones routing the caller directly to the called station user's mailbox. Keyset users can press one button to retrieve messages from the voice mail system. A Voice Mail Transfer key permits keyset users to easily transfer a caller directly to an individual voicemail box without navigating through menus.

4.1.1.103 VoIP Networking

The OfficeServ 100 system provides networking through the VoIP Network. The MGI card is required for calling another OfficeServ system through VoIP Networking. The features provided by VoIP Networking conform to that of PRI/Q-SIG Networking.

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4.1.1.104 VoIP Trunk Interface (H.323/SIP)

The OfficeServ 100 provides VoIP Trunk Interfaces. The system processor controls the calls, and a separate MGI card is required for the physical connection to the speech path.

4.1.1.105 Walking Class of Service

This feature allows users to make calls or use features from a station that is restricted. The users may either use the WCOS feature code or the authorization code feature. Both methods change the class of service to correspond with the station passcode or authorization code that is dialled. After the call is completed, the station returns to its programmed class of service.

4.1.1.106 Wireless LAN Service

The wireless LAN interface is provided by the 4WLI card.. One 4WLI card can support up to 4 WBS24s, (AP(Access Point)s.).
In an environment where the WBS24 is installed, a user can receive the wireless LAN service using mobile phone (WIP-5000M), PC and PDA loaded with the wireless LAN card, or using wireless IP phone.

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4.2 Station Features

- ADD-ON MODULE
- APPOINTMENT REMINDER
- AUTOMATIC HOLD
- AUTOMATIC PRIVACY
- BACKGROUND MUSIC
- BUSY STATION CALLBACK
- BUSY STATION INDICATIONS(BLF)
- CALL FORWARDING
- CALL LOGS
- CALL PICKUP
- DIRECT STATION SELECTION(DSS)
- DO NOT DISTURB(OVERRIDE)
- DO NOT DISTURB(PROGRAMMABLE)
- DOOR LOCK RELEASE
- EXCLUSIVE HOLD
- GROUP LISTENING
- HEADSET OPERATION
- HEARING AID COMPATIBLE
- LINE QUEUING WITH CALLBACK
- LINE SKIPPING
- LOUD RINGING INTERFACE
- MESSAGE WAITING LIGHT/INDICATION
- MUTE MICROPHONE/HANDSET
- OFF-HOOK RINGING
- OFF-HOOK VOICE ANNOUNCE(STANDARD)
- OFF-HOOK VOICE ANNOUNCE(EXECUTIVE)
- ONE TIME DO NOT DISTURB
- ONE TOUCH DIALLING KEYS
- ON-HOOK DIALLING
- PROGRAMMABLE KEYS
- PROGRAMMED STATION MESSAGES
- PROTECTION FROM BARGE-IN
- PULLOUT DIRECTORY TRAY
- PULSE TO TONE SWITCH OVER
- REDIAL
  - AUTO RETRY
  - LAST NUMBER
  - MEMO REDIAL
  - SAVE NUMBER
- REMOTE HOLD
- RING MODES
  - AUTO ANSWER
  - RING-EIGHT TONE CHOICES
  - VOICE ANNOUNCE
- RINGING PREFERENCE
- SPEAKERPHONE
- STATION LOCK
- TRI-COLORED LIGHTS
- VOLUME SETTINGS
  - HANDSET
  - BGM
  - RINGING
  - PAGING
  - SPEAKER
  - OFF-HOOK RING
- WALL-MOUNTABLE KEYSETS

Optional hardware and software

Requires optional hardware and/or software. Ask your dealer for details.

4.2.1 Station Feature Descriptions

4.2.1.1 Add-On Module

64 Button Module

The 64-button module adds to the capability of any keyset. Up to four 64-button modules can be added to each keyset. The 64 programmable red LED buttons with red LED can be used for feature keys, DSS/BLF keys or one touch speed dial buttons. A maximum of 5 can be installed on an OfficeServ 100 system.

4.2.1.2 Appointment Reminder

Keysets with an alarm key can be used like an alarm clock. When programmed for a specific time, the keyset will sound a distinctive ring to remind the user of meetings or appointments. Alarms can be set for 'today only' or for every day at the same time.
Up to three alarms may be set at each keyset. Display keysets can also show a programmed message when the alarm rings.

4.2.1.3 Automatic Hold

Station users can enable or disable automatic hold at their keysets. While a user is engaged on an outside(C.O.) call, pressing another trunk key, route key or CALL button automatically puts the call on hold when this feature is enabled. Pressing TRSF, CONFERENCE, PAGE or a DSS key will always automatically place the call on hold. This type of automatic hold is not a user-selectable option.

4.2.1.4 Automatic Privacy

All conversations on outside lines and intercom calls are automatically private. The privacy feature can be turned off on a per-line basis.

NOTE

Intercom calls
Intercom calls cannot be automatically held.

4.2.1.5 Background Music

Keyset users may choose to hear music through their keyset speakers when optional external sources are installed. Each user may adjust this level by the use of a volume control program at the selected keyset.

4.2.1.6 Busy Station Callback

When reaching a busy station, callers may request a callback by pressing one button or dialling a code. The system rings the caller back when that station becomes idle(a system-wide maximum of 100 callbacks are allowed at one time including busy station and busy trunk).

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4.2.1.7 BLF (Busy Station Indications)

DSS/BLF keys may be assigned to any keyset or add-on module. These buttons will be off when the station is idle, light red when that station is in use and flash distinctively when that station is in the DND mode.

4.2.1.8 Call Forwarding

Station users can forward internal and outside calls to other destinations immediately (Forward All), when busy(Forward Busy) or if not answered in a programmable number of seconds(Forward No Answer). These forward destinations can all be different. Once a destination has been programmed, it can be turned on and off with a programmable key. Forward All takes priority over Busy and No Answer conditions.

In addition to the three usual methods of forwarding described above, a fourth option called Follow Me is available. This option allows a station user to set a Forward All condition from his/her station to another station while at the remote station. To display the Follow Me condition, the TRSF key lights steady red at the station that is forwarded. The TRSF key also lights if Forward All is set and no key is programmed for Forward All.

Keyset users can set the external destination for all kinds of forwarding. Each outside line may be programmed to either follow or ignore station call forwarding. A per-station option controls whether internal calls forward to voice mail or not. Single line telephones must have the system administrator program this feature for them.

4.2.1.9 Call Logs

With the call log feature, a display keyset user can review up to 50 of the last incoming calls from the Caller ID review list or up to 50 of the last external telephone numbers that were dialled.
The numbers can be viewed, stored and/or dialled using the associated soft keys. LCR must be enabled for dialling and storing numbers from the CID review list. Optional hardware and/or software may be needed for Caller ID.

4.2.1.10 Call Pickup

With directed call pickup, a user can answer calls ringing at any station by dialling a code plus that extension number. The group pickup feature allows the user to answer any call ringing within a pickup group. Pickup keys may be customized with extenders to allow pickup from a specific station or pickup group. The OfficeServ 100 software has 20 programmable pickup groups.

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4.2.1.11 DSS (Direct Station Selection)

Programmable keys can be assigned as DSS keys and associated with extension numbers. Users press these keys to call or transfer calls to the assigned stations.

4.2.1.12 Do Not Disturb (Override)

The DND Override feature allows a keyset with a DNDO(DND Override key) and the appropriate class of service to override the DND setting at a called keyset. This will allow a user to go into DND while waiting for an important call and have that call transferred to them via a screened transfer from a station(for example the users secretary) with a DNDO key.

4.2.1.13 Do Not Disturb (Programmable)

DND(The Do Not Disturb) feature is used to stop all calls to a station. System programming can allow or deny use of the DND feature for each station. Parties calling a station in DND will receive reorder tone. When in DND mode, calls may be forwarded to another destination. See Forward DND option. A keyset without a DND button can activate DND via the feature access code. The ANS/RLS key will flash at 112 ipm(rapidly) when DND is set. There is a programmable option to allow a C.O. line to override DND at its ring destination if that destination is a single station.

4.2.1.14 Door Lock Release

Stations programmed to receive calls from a door phone can dial a code to activate a contact closure for control of a customer-provided electronic door lock.

4.2.1.15 Exclusive Hold

Pressing HOLD twice will hold a call exclusively at a station so no other station can pick up that call. Intercom calls are automatically placed on exclusive hold.

4.2.1.16 Group Listening

This feature allows users to turn on the speaker while using the handset. It allows a group of people to listen to the distant party over the speaker without the microphone turned on.

4.2.1.17 Headset Operation

Every keyset can be programmed to allow the use of a headset. In the headset mode, the hookswitch is disabled and the ANS/RLS key is used to answer and release calls. Keyset users may turn headset operation ON/OFF by keyset programming or more easily by pressing the headset ON/OFF key. The headset key lights steady red when the keyset is in headset mode. The ANS/RLS key lights if headset mode is activated by keyset programming only.

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4.2.1.18 Hearing Aid Compatible

All OfficeServ 100 keysets are hearing aid compatible as required by the ACA.

4.2.1.19 Line Queuing with Callback

When the desired outside line is busy, the user can press the CALLBACK key or dial the access code to place his/her station in a queue. The user will be called back when the line is available(a maximum of 100 callbacks are allowed system-wide at one time including busy station and busy trunk).

4.2.1.20 Line Skipping

When the user is talking on an outside line and the automatic hold feature is turned off, he/she may press an idle line key and skip to that line without causing the previous call to go on hold.

4.2.1.21 Loud Ringing Interface

The MISC board has 3 relays that can be programmed to provide a dry contact closure for control of a customer provided loud ringing device. Any of these relays can be programmed to operate with a specific station or station group.

4.2.1.22 Manual Signalling

Phones can signal each other via a programmable button. This allows one station to alert another without establishing a voice conversation. Each press of the button results in a 500 milliseconds of ring tone being set to the intended station. An individual manual signalling button must be programmed for each station to be signaled.

4.2.1.23 Message Waiting Light/Indication

When a message indication is left at a keyset, the MESSAGE button will slowly flash red. Single line telephones will receive a distinctive dial tone to notify them that a message is waiting. Message waiting indications can be left for any station or group of stations.

4.2.1.24 Mute MicroPhone/Handset

Any keyset user can mute the keyset’s handset transmitter by pressing the MUTE key. In addition, keyset users can also mute the keyset microphone while the keyset is in speakerphone mode.

4.2.1.25 Off-Hook Ringing

When a keyset is in use, the system will provide an off-hook ring signal to indicate that another call is waiting. The ring signal is a single ring repeated. The interval is controlled by a system-wide timer. Single line stations will receive a tone burst through the handset receiver instead of a ring.

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4.2.1.26 Off-Hook Voice Announce (Executive)

A keyset associated with an add-on module may receive an executive off-hook voic e announcement while on another call. The called keyset user may reply handsfree without interrupting the call in progress. Only keysets with an button OHVA(off-hook voice announce) can off-hook voice announce to keysets with AOMs.

4.2.1.27 Off-Hook Voice Announce (Standard)

Keysets may receive a voice announcement while on another call. The calling station must have an OHVA key. When transferring a call to a busy keyset or while listening to busy signal, the station user can press the OHVA key to make an OHVA call to the busy keyset. If the called keyset is in the DND mode, it cannot receive OHVA calls.

4.2.1.28 One Time Do Not Disturb

The Do Not Disturb(One Time) feature is used to stop all calls to a station when the user is on an outside line and does not want to be disturbed for the duration of the call.
Upon completion of the call, DND is canceled and the station is returned to normal service. This feature requires a programmed button.

4.2.1.29 One Touch Dialling Keys

Frequently used speed numbers can be assigned to one touch dialling keys for fast accurate dialling.

4.2.1.30 On-Hook Dialling

Any keyset user can originate calls without lifting the handset. When the called party answers, the user may speak into the microphone or lift the handset for more privacy.

4.2.1.31 Programmable Keys

LCD 24B and STD 24B keysets have 24 programmable keys, LCD 12B and Basic 12B keysets have 12, and 7B keysets have 12. Each key can be programmed for more than 25 different uses to personalize each phone. Examples of keys include individual outside line, individual station, group of lines, group of stations and one touch speed dial buttons. Using these keys eliminates dialling access codes.

The following feature keys have extenders that make them more specific: SPEED DIAL, SUPERVISOR, PAGE, DSS, DIRECTED PICKUP, GROUP PICKUP, DOOR PHONE, BOSS, PROGRAMMED MESSAGE, IN AND OUT OF GROUP, FORWARD and VOICE MAIL TRANSFER. The extender can be a station, a group or another identifying number.

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4.2.1.32 Programmed Station Messages

Any station may select one of 20 to be displayed at a calling party's keyset. Ten messages are factory-programmed but may be reprogrammed. On OfficeServ 100 software last five messages can be programmable per station basis.

NOTE

Calling party
The calling party must have a display keyset to view these messages.

4.2.1.33 Protection from Barge-In

Each station can be programmed as secure or not secure. Secure stations cannot be barged-in on. A station that is not secure cannot be barged-in on when talking to a secure station.

4.2.1.34 Pullout Directory Tray

A pullout directory tray is conveniently located beneath all keysets. It is used to record station directory names and speed dial numbers.

4.2.1.35 Pulse to Tone Switchover

When dialling a number on a dial pulse network, a station user can dial # and the OfficeServ system will begin to send DTMF.

4.2.1.36 Redial

There are three types of external redial available to all station users. Each type can redial up to a maximum of 18 digits.

- Auto Retry - When an outside number is dialled and a busy signal is received, the auto retry feature can be used to reserve the outside line and automatically redial the number for a programmable number of attempts(available to keyset users only)
- Last Number - The most recently dialled number on a C.O. line is saved and may be redialled by pressing the redial key or dialling the LNR access code.
- Manual Retry with LNR - When you make an outside call and receive a busy signal you can press the LNR key to redial the same number again. This operation can be manually repeated for a limited number of attempts as defined by system programming(available to keyset users only).
- Memo Redial - When you are calling directory assistance you can store the number you are given using the dial pad and SAVE number feature. There is no need for a pencil and paper(available to phone users only).
- Save Number - Any number dialled on a C.O. line may be saved for redial at a later time.

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4.2.1.37 Remote Hold

When you wish to place a call on hold at another station, press TRSF and dial the station number(or press the appropriate DSS key). Press the HOLD key. This will place the call on system hold on an available CALL button or Line Key at the remote station.

4.2.1.38 Ring Modes

Each keyset user can select one of three distinct ways to receive intercom calls. The phone can automatically answer on the speakerphone, voice announce through the speaker or receive ringing. When the ring mode is selected, keyset users can choose one of eight distinct ring tones. Forced Auto Answer is invoked by the calling station and is controlled by the calling station's class of service.

4.2.1.39 Ringing Preference

Lifting the handset or pressing the speaker button automatically answers a call ringing at the keyset. Using this method, users are assured of answering the oldest call first.
When ringing preference is turned off, the user must press the flashing button to answer. Users may answer ringing lines in any order by pressing the flashing button.

4.2.1.40 Speakerphone

DCS LCD 24B and DCS LCD 12B keysets have built-in speakerphone. The speakerphone enables calls to be made and received without the use of the handset. All iDCS keysets are speakerphones. The iDCS 28 Button and the iDCS 18 Button can have a Full Duplex Speakerphone Module added.

4.2.1.41 Station Lock

With a programmable personal station passcode, any keyset or single line station can be locked and unlocked to control use of each telephone. There are two lock options: 1=LOCKED OUTGOING and 2=LOCKED ALL CALLS. See the following table for more details.

4.2.1.42 Tri-Colored Lights

LCD 24B and STD 24B keysets have 16 keys equipped for tri-colored LED indications(green, red and amber). LCD 12B and Basic 12B models have six of these keys and 7 button keysets have three. To avoid confusion, your calls always light green, other calls show red and recalls light amber.

4.2.1.43 Volume Settings

Each keyset user may separately adjust the volume of the ringer, speaker, handset receiver, background music, page announcement and off-hook ring tone.

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4.2.1.44 Wall-Mountable Keysets

Each keyset, add on module and 64 button module can be wall mounted by reversing the base wedge. The newest base wedge may not fit all wall mounting scenarios so in these cases the original wall mount/base wedge unit should be used.

4.3 Display Features

ACCOUNT CODE DISPLAY
CALL DURATION TIMER
CALL FOR GROUP IDENTIFICATION
CALL PROCESSING INFORMATION
MESSAGE WAITING CALLER NUMBER
CALLER ID INFORMATION
CALLING PARTY NAME
CALLING PARTY NUMBER
CONFERENCE INFORMATION
DATE AND TIME DISPLAY
DIALLED BY NAME
UCD SUPERVISOR DISPLAYS
ENHANCED STATION PROGRAMMING
IDENTIFICATION OF RECALLS
IDENTIFICATION OF TRANSFERS
OUTSIDE LINE IDENTIFICATION
OVERRIDE IDENTIFICATION
PROGRAMMED MESSAGE DISPLAY
SOFT KEYS
STOPWATCH TIMER
DIALLED NUMBER

4.3.1 Display Feature Descriptions

4.3.1.1 Account Code Display

Account codes are conveniently displayed for easy confirmation. If entered incorrectly, users may press the ACCOUNT key again and reenter the account code.

4.3.1.2 Call Duration Timer

The system can automatically time outside calls and show the duration in minutes and seconds. Station users may manually time calls by pressing the TIMER button.

4.3.1.3 Call for Group Identification

When a call is made to a station group, the display shows [CALL FOR GROUP] and the user’s group number. These calls can be answered with a different greeting than calls to the user’s extension number.

4.3.1.4 Call Processing Information

During everyday call handling, the keyset display will provide information that is helpful and in some cases invaluable. Displays such as [CALL FROM 203], [TRANSFER TO 202], [701: RINGING], [TRANSFER FM 203], [708 busy], [Camp on to 204], [Recall from 204], [Call for 501], [message from 204] and [FWD ALL to 204] keep users informed of what is happening and where they are. In some conditions, the user is prompted to take action and in other cases the user receives directory information.

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4.3.1.5 Caller ID Information

Caller ID information is dependent on the use of display keysets. The following list explains the displays that are used with Caller ID.

Name/Number Display

Each display keyset user can decide if he/she wants to see the Caller ID name or Caller ID number in the display. Regardless of which one is selected to be seen first, the NND key is pressed to view the other piece of CLIP information.

Next Call

In the event that there is a call waiting or a camped-on call at the user's keyset, the user can press the NEXT key to display the Caller ID information associated with the next call in queue at the station. Either the CLIP name or CLIP number will show in the display depending on the N/N selection.

Save Clip Number

At any time during an incoming call that provides CLIP information, the user may press the SAVE key. This saves the CLIP number in the Save Number feature. Pressing the SAVE number redial key will dial the CLIP number. The system must be using LCR to dial the saved number.

Store Clip/ANI number

At any time during an incoming call that provides CLIP information, the user may press the STORE key. This saves the CLIP number as a speed dial number in the personal speed dial list. The system must be using LCR to dial the stored number.

Inquire Park/Hold

When a user is informed that an incoming call is on hold or has been parked, the user may view the Caller ID or ANI information before he/she retrieves the call. This will influence how the user chooses to handle the call.

Clip Review List

This feature allows display keyset users to review CLIP information for calls sent to their stations. This list can be from ten to fifty calls in a first in, first out basis. The list includes calls that were answered and calls that rang the user's station but that were not answered. When reviewing this list, the user can press one button to dial the person back. The system must be using LCR to dial the stored number.

Investigate

This feature allows selected stations with a special class of service to investigate any call in progress. If CLIP information is available for an incoming call, the selected stations can know to whom the OfficeServ 100 user is speaking. On outgoing calls, the selected stations can see who was called. After investigating, the selected stations may barge-in on the conversation, disconnect the call or hang up.

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Abandon Call List (50)

The system has a system-wide abandon call list that stores CLIP information for calls that rang but were not answered. The list is accessed using the operator's passcode.
When reviewing this list, you are provided options to CLEAR the entry or DIAL the number. You can use the NND key to toggle between the CLIP name, CLIP number and the date and time the call came in. The system must be using LCR to dial numbers from the abandon call list. The abandoned call list will store up to 50.

4.3.1.6 Calling Party Name

For intercom calls, LCD 24B and LCD 12B keysets show the calling party's name before answering. The names must be stored in the system directory list and can be up to 11 characters long.

4.3.1.7 Calling Party Number

When an intercom call is received, all display stations show the calling party's extension number before the call is answered.

4.3.1.8 Conference Information

When a conference is set up, each extension and outside line number is displayed at the controlling station when it is added. When a station is added, its display shows [Conf with xxx] alerting the user that other parties are on the line.

4.3.1.9 Date and Time Display

In the idle condition, the current date and time are conveniently displayed. Display keysets can have a 12 or 24 hour clock in either the ORIENTAL or WESTERN display format with information shown in upper case or lower case letters.

4.3.1.10 Dial by Name

Each station and speed dial number can have an associated directory name. Any station or speed dial number can be selected by scrolling alphabetically through a directory list. There are three directories:

- System wide speed dial list
- Personal speed dial list
- Station directory list

This online 'phone book' allows display keyset users to look up and dial any speed dial number or station in seconds.

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4.3.1.11 Dialled Number

When an outside call is made, digits are displayed as the user dials them. If the display indicates an incorrect number was dialled, the user can quickly hang up before billing begins.

4.3.1.12 Enhanced Station Programming

Personal programming options are easy to select and confirm with the help of the display.

4.3.1.13 Identification of Recalls

Hold recalls and transfer recalls are identified differently than other ringing calls. Hold recalls indicate the recalling line or station number and the associated name. Transfer recalls indicate the recalling line or station and where it is coming from.

4.3.1.14 Identification of Transfers

The display will identify who transferred a call to the user.

4.3.1.15 Message Waiting Caller Number

When the message indication is on, pressing the MESSAGE button displays the station number(s) of the person(s) who have messages for the user. Display keyset users can scroll up and down to view message indications.

4.3.1.16 Outside Line Identification

Each line can be identified with an 11 character name. Incoming calls display this name before the call is answered. This feature is helpful when individual lines must be answered with different greetings.

4.3.1.17 Override Identification

If another station barges-in on a user’s conversation, the display will alert the user with a [Barge from 2xx] display if the system is set for barge-in with tone.

4.3.1.18 Programmed Message Display

Preprogrammed station messages set by other stations are displayed at the calling station’s keyset.

4.3.1.19 Soft Keys

Below the display, there are three soft keys and a SCROLL button. These keys allow the user to access features in his/her class of service without requiring the keyset to have designated feature keys.

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4.3.1.20 Stopwatch Timer

Display keyset users find this feature very convenient to time meetings, calls and other functions. Users simply press once to start the timer and press again to stop the timer.

4.3.1.21 Text Messaging

This feature allows two display phone users to respond to each other with preprogrammed messages.
After receiving an Off Hook Voice Announcement or Station Camp-On, you may respond with a text message while continuing to talk and listen to your outside party. The other station can view this message and take the appropriate action or respond back with another text message.

In OfficeServ 100 system , there are additional Text Messages per station basis. Only the display phones that are allowed in system programming will receive the TMSG soft button in the display and can use this feature.

4.3.1.22 UCD Supervisor Displays

With the optional AA card, when UCD is used, multiple supervisors can view information about the UCD groups calls or agents.

Call Screen

This allows the supervisor to view how many calls are in queue, the longest wait time, how many calls have been received today, what the average time in queue is and how many calls were abandoned.

Agent Screen

This allows the supervisor to monitor how many agents are logged in, check each agents status(IN GROUP, OUT OF GROUP, or DND), view each agents total number of calls, average call length or average ring time.

Supervisor display

Accessing this screen will also allow a Supervisor to change the status of each agent(IN GROUP, OUT OF GROUP, or DND).

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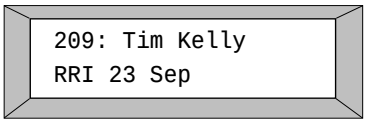
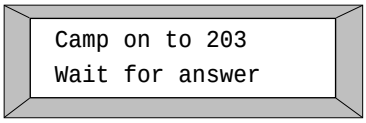
4.3.2 Sample Displays

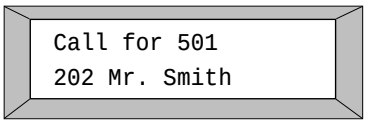
PROSTAR LCD 12B and LCD 24B display model keysets have a large, easy-to-read, 32 character liquid crystal display. Helpful call processing information is provided so everyday call handling is quick and easy. Here are just some of the displays you may see.



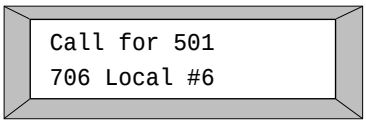
Idle display shows extension, name, day, date and time.



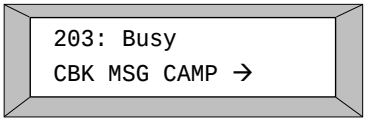
This station is camped-on to extension 203 and is waiting for 203 to answer.



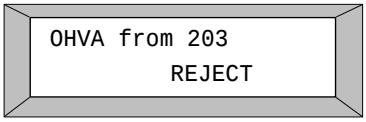
This station in the sales department is receiving a group call from Mr. Smith.



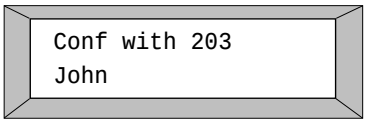
This display tells you this is a new incoming call to the sales department.



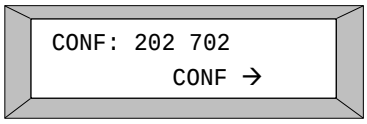
This station is calling station 203 which is currently busy.



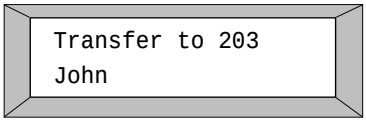
This station is receiving an off-hook voice announcement from station 203.



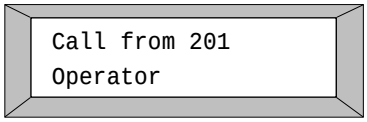
This station is on a conference call with John, extension 203. Assume other parties will hear your conversation.



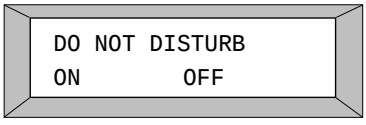
This station is on a conference call with extension 202 and trunk 702 and has the option to add two more parties.



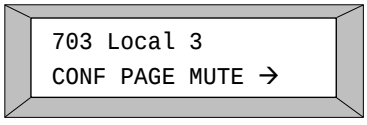
This station is transferring a call to John at extension 203.



This station is receiving a call from extension 201.



This station is setting the Do Not Disturb feature.



This station is receiving a call from extension 201.

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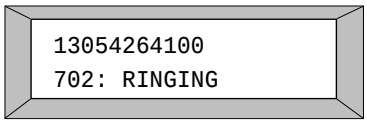
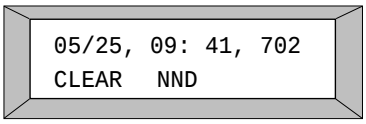
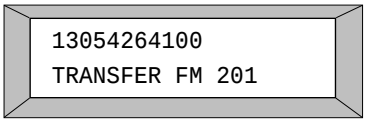
4.3.3 Sample Caller ID Displays



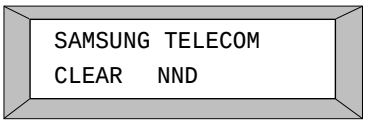
This display shows an incoming call from 1-305-426-4100 on Line 702 ringing directly at your station.



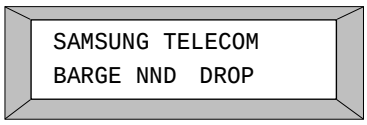
This display shows the information on the abandoned call list. This call came in on May 25 at 9:41 A.M on line 702. The user can CLEAR the entry. DIAL the caller back or examine further NND information.



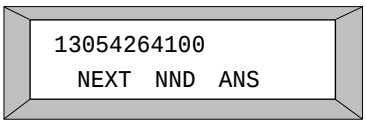
This display shows an incoming call from 1-305-426-4100 on Line 702 ringing directly at your station.



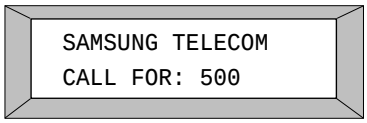
This display shows an entry in a station review list showing the three initial options. The arrow indicates other options available to you by pressing the SCROLL key.



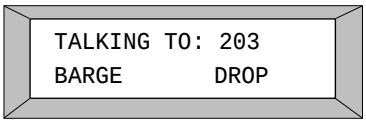
This display shows an investigation of a station that is talking to Samsung Telecom. Investigator can BARGE-in to the conversation, DROP the call from the system of examine further NND information.



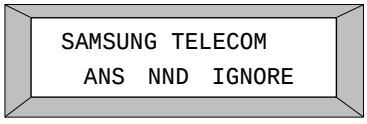
This display is seen while examining calls in oueue at your keyset.



This display shows an incoming call from Samsung Telecom ringing at group 500.



This display can be seen when investigating an intercom call.
The investigator can BARGE-in or DROP the connection.



This display is seen while using the INQUIRE feature. It shows the three options available while you are checking on a held or parked call.

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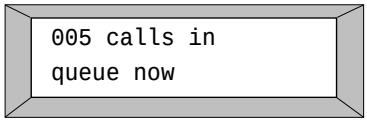
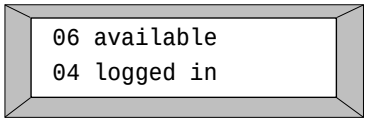
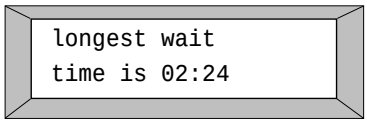
4.3.4 Sample UCD Displays



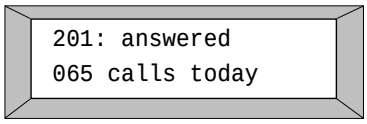
There are five calls currently waiting to be answered by the UCD group.



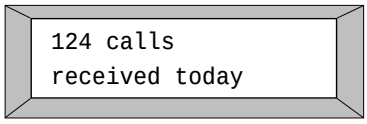
There are six members in the group. Four of the members are currently logged in.



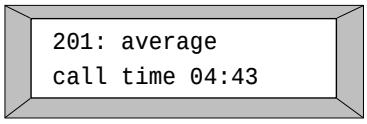
The longest call on hold(waiting to be answered) was for two minutes, 24 seconds. This data applies to all calls since the supervisor data was last cleared. It does not necessarily represent calls currently in queue.



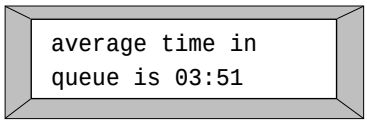
The agent at station 201 has answered 65 calls today.



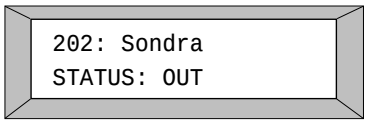
The UCD group has received 124 calls today.



The average call length for station 201 is four minutes and 43 seconds.



The average time on hold(waiting to be answered) is three minutes and 51 seconds.



Station 202 is currently out of the group.(The display can also show IN GROUP and DND.)

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4.4 Sample SMDR Printout (Without Caller ID)

```
                    SMDR REPORT FOR [Samsung R & D] 09/23/94 17:30
=============================================================================================================
  T  EXT  AUTH  TRK  MM/DD  STT.TIME  DURATION  FG  DIALLED DIGIT  ACCOUNT CODE
=============================================================================================================
  1  208        705  09/23  16:12:33  00:05:12  OT  12145551234567
  1  226        703  09/23  16:13:31  00:00:29  IT
  1  202        703  09/23  16:14:00  00:00:25  TT
  1  210        704  09/23  16:15:28  00:01:52   O  4205069        1234567890*#
  1  201        702  09/23  16:15:51  00:01:45   I
  1  211        703  09/23  16:19:53  00:00:25   T                  987654321012
  1  204  5555  703  09/23  16:18:16  00:01:57   O  4205068
  1  208        702  09/23  16:21:12  00:00:19  IT
  1  210             09/23  16:21:31  00:04:15        ALARM RINGING
  1  211        706  09/23  16:20:59  00:02:43   O  18005551234
  1  208             09/23  17:04:10             DND ON
  1  208             09/23  17:12:07             DND OFF
  1  207             09/23  17:12:05             GROUP OUT
  1  207             09/23  17:16:55             GROUP IN
  1                  735  09/23  17:17:15  00:00:11  DE  3833
  1  209             735  09/23  17:17:38  00:00:30  DI
  1  735             709  09/23  17:18:08  00:12:19  DO  13055551234
  1  706             701  09/23  17:25:15  00:00:28  FI
  1  701             706  09/23  17:25:15  00:10:25  FO  4205071
  1  312  2326       705  09/23  18:00:03  00:08:12   O  13054264100    232552779600
```

Tenant 1 Digit
Extension 2-4Digit
Authorization Code 4 Digit
C.O. Line No.
Data Call Made or Received Month:Day
Time Call Made or Received Hrs:Mins:Secs
Call Duration Hrs:Mins:Secs
Call Type Flag 2 Characters
Telephone No. Dialled 1-18 Digits
Account Code 1-12 Digits

Call Type Flag Definitions

DE	DISA call with error
T	Transferred call that was terminated
IT	Incoming transfer
FI	Incoming call forwarded to an external number
OT	Outgoing transfer-Outgoing call made and transferred
TT	Caller received a transferred call and transferred it again
O	Outgoing
I	Incoming Call
DI	DISA call in
DO	DISA call out
FO	Outgoing record of forwarded call

4.5 Sample SMDR Printout (With Caller ID)

SMDR REPORT FOR [Samsung R & D] 09/23/94 17:30

T	EXT	AUTH	TRK	MM/DD	STT.TIME	DURATION	FG	DIALLED DIGIT	ACCOUNT CODE	CID/ANI NUMBER	CID/ANI NAME
1	201		701	01/02	17:15:13	00:00:28	IT			13054264100	SAMSUNG TELECOM
1	205		701	01/02	17:15:41	00:00:02	T			13054264100	SAMSUNG TELECOM
1	247		702	01/02	17:24:49	00:00:25	IT			13055557890	CURTIS SMITH
1	202		702	01/02	17:25:14	00:00:03	T			13055552354	SUSAN HOLLINS
1	202		702	01/02	17:25:56	00:00:00	O	4264100			
1	217		702	01/02	17:26:35	00:00:11	IT			13054264385	SAMSUNG TELECOM
1	203		702	01/02	17:26:46	00:00:16	T			13054264385	SAMSUNG TELECOM
1	203		702	01/02	17:27:13	00:00:20	O	4264385			
1	203		702	01/02	17:28:04	00:00:00	O	4264385			
1	201		701	01/02	17:28:34	00:00:04	IT			13055559748	JOAN LEVIN
1	203		701	01/02	17:28:38	00:00:14	T			13055558703	LENNY WILKINS
1	203		702	01/02	17:29:54	00:00:00	OT	5556420			
1	205		702	01/02	17:31:06	00:03:00	TT			13055556420	PIZZA DELIVERY
1	209		702	01/02	17:33:24	00:02:18	T			13055556420	PIZZA DELIVERY
1			701	01/02	17:41:45	00:00:30	A			13055553426	TERRY PRUITT
1			701	01/02	17:42:15	00:00:02	A			13055554676	BLANCHE MARKER
1	203		702	01/03	17:51:17	00:00:22	O	5555069			
1			701	01/03	17:56:02	00:00:05	A			13055556733	ALEX DAULTON
1			701	01/03	17:56:07	00:00:54	A			13055559723	CHAZ NEWMAN

Tenant 1 Digit
Authorization Code 4 Digit
Extension 2-4Digit
C.O. Line No. 2-4Digit
Data Call Made or Received Month:Day
Time Call Made or Hrs:Mins:Secs
Call Duration Hrs:Mins:Secs
Call Type Flag 2 Characters
Telephone No. Dialled 1-18 Digits
Account Code 1-12 Digits
Caller ID/ANI Number 1-15 Digits
Caller ID/ANI Name 1-15 Characters

Call Type Flag Definitions

DE	DISA call with error
T	Transferred call that was terminated
IT	Incoming transfer
FI	Incoming call forwarded to an external number
OT	Outgoing transfer-Outgoing call made and transferred
TT	Caller received a transferred call and transferred it again
O	Outgoing
I	Incoming Call
DI	DISA call in
DO	DISA call out
FO	Outgoing record of forwarded call

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4.6 Sample UCD Report

```
UCD GROUP 529 : SALES

FROM: SUN 02 Feb 00:00
TO  : SUN 02 Feb 02:54

CALL STATISTICS
===============
AVERAGE RING TIME(TIME TO ANSWER)...... 00:40
NUMBER OF TIMES ALL AGENTS BUSY........ 00002
AVERAGE TIME IN QUEUE.................. 00:51
TOTAL CALLS RECEIVED................... 00011
LONGEST QUEUE TIME(TODAY).............. 02:14
TOTAL CALLS ABANDONED.................. 00004

AGENT STATISTICS
================
MEMBER AGENT   NAME    CALLS   AVERAGE RING
                       ANSWERED        CALL TIME       TIME
-------------------------------------------------------------------
01     210     JOHN    0002    01:55           00:05
02     211     SAM     0001    02:18           00:06
03     208     MIKE    0003    01:22           00:04
04     207     PETER   0001    03:16           00:05

===================================================================
UCD GROUP 515 : SUPPORT

FROM: MON 03 Jan 08:30
TO  : SUN 02 Jan 02:54

CALL STATISTICS
===============
AVERAGE RING TIME(TIME TO ANSWER)...... 00:07
NUMBER OF TIMES ALL AGENTS BUSY........ 00005
AVERAGE TIME IN QUEUE.................. 01:06
TOTAL CALLS RECEIVED................... 00023
LONGEST QUEUE TIME(TODAY).............. 01:02
TOTAL CALLS ABANDONED.................. 00001

AGENT STATISTICS
================
MEMBER AGENT   NAME    CALLS   AVERAGE RING
                       ANSWERED        CALL TIME       TIME
-------------------------------------------------------------------
01     223     FRED    0012    02:33           00:08
02     213     JANE    0010    01:04           00:04
```

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4.7 UCD Call Statistics

4.7.1 Calls in Queue Now

How many calls are currently in queue.
This statistic is a real time statistic and so will not print on a report.

4.7.2 Abandoned Calls

This shows the number of callers that reached the UCD group, but hung up before being answered. A high number probably means that there are not enough agents available and the wait time is too long.

4.7.3 Average Ring Time

This is calculated from the time an agent begins to ring until the time an agent answers the call, this does not include ringing at an agent station that does not answer or is logged out because of the ring next option.

4.7.4 Number of Times All Agents Busy

This is the number of times that a call is placed to an UCD group and all agents are busy or out of group. This check is made when the call is first placed to the group.

Example: If there are 5 members in a group, 3 are Out of Group one is busy and one is idle, and a call is placed to the group, because there is an idle station the all agents busy counter is not incremented.

If the idle station rings, does not answer and is logged out, although the condition of the group is now all agents busy, the check has been made and the agent busy statistic does not increment.

Also if a call comes into a group with all agents busy and then one becomes idle, the busy counter will increment because the check has been made.

4.7.5 Average Time in Queue

This is calculated as an average of all the calls that were in queue.
Note that this is ONLY an average of the calls that were in queue.
The caller must have overflowed to the UCD recording to be considered in queue.
A call is considered in queue until it is answered or until it goes to the final destination.

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4.7.6 Total Calls Received

The total number of times that calls were sent to a group. This includes calls that were answered by the group, calls that went to a group with all agents busy or out of group, calls that are abandoned and calls that go to UCD final destination. This includes intercom calls to the UCD group.

If this number is less than the total calls received by all the agents it is possible that calls were transferred from one agent to another.

If this number is more than the total calls received by all the agents it is possible that calls were unanswered by an agent and went to final destination or callers hung up while in queue.

This statistic includes:

- Calls answered by agent.
- Calls that are not answered by an agent and go to final destination.
- Calls that are sent to the UCD group but callers hang up before being answered.

4.7.7 Longest Queue Time Today

This shows the longest call in queue today. The queue time is calculated as follows:

- Queue time begins when a caller starts to hear the first UCD message.
- Queue time ends when a caller is either
  - Answered by an agent
  - System gets disconnected from C.O. or
  - Caller is transferred to final destination

4.7.8 Longest Queue Time Now

This shows the longest call currently in queue. The queue time is calculated as follows:

- Queue time begins when a caller starts to hear the first UCD message.
- Queue time ends when a caller is either
  - Answered by an agent
  - System gets disconnected from C.O. or
  - Caller is transferred to final destination

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4.8 UCD Agent Statistics

4.8.1 Logged In

The number of stations programmed in the UCD group and the number of stations that are currently logged in. This statistic is a real time statistic and so will not print on a report.

4.8.2 Status

This screen shows the agents name, extension number and status. The status can be In Group, Out of group or in DND.
This statistic is a real time statistic and so will not print on a report.

4.8.3 Calls Answered

The total number of calls answered by the agent. This does not include ring no answer to an agent station.
If this total number is less than the calls received by the group it is possible that calls were unanswered by an agent and went to final destination or that callers hung up while in queue.
If this total number is more than the calls received by the group it is possible that calls were transferred from one agent to another.

4.8.4 Average Call Time

This is an average of all the call durations for the agent.

4.8.5 Average Ring Time

This is an average of all the ring times for the agent. Ring times are previously explained.

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4.9 Sample Traffic Report

```
TRAFFIC REPORT FOR [ SAMSUNG ] Mar/21/1999 13:35

************************ SYSTEM STATISTICS ************************

BEGINNING:  Mar/15/1999  00:42            ENDING: Mar/21/1999 13:32

    ACTIVITY                                          SYSTEM TOTAL
    INCOMING TRUNK CALLS - ANSWERED.................     3041
    INCOMING TRUNK CALLS - NOT ANSWERED.............       26
    OUTGOING TRUNK CALLS ...........................     2168
    A SELECTED TRUNK WAS BUSY.......................       44

    INTERCOM CALLS – COMPLETED .....................    7178
    INTERCOM CALLS - NOT ANSWERED ..................    1540

    TRUNK RECALLS TO STATION .......................     145
    TRUNK RECALLS TO OPERATOR GROUP ................      32

    INTERNAL PAGE USED .............................      35
    EXTERNAL PAGE USED .............................      79
    ALL PAGE USED ..................................     231

************************ TRUNK GROUPS ************************

 GROUP    OUTGOING  BUSY
  9     1245     18
  800   521      3
  801   20       3
  802   0        0

************************ INDIVIDUAL TRUNKS ************************

TRUNK    TRUNK-NAME    ATTA    ANSD    NOT-ANSD    OUTGOING   BUSY
  701      LOCAL 1       0      737        0          19        12
  702      LOCAL 2       0      541        4          26        11
  703      LOCAL 3       0      290        1          37        21

************************ STATION HUNT GROUPS ************************

<————————— OUTSIDE CALL —————————>                        <-INTERCOM->
GROUP   ANSD   NOT-ANSD                                        ANSD
  500    439      19                                           61
  501    261      37                                           38
  502     40       2                                           77
  503     87       5                                          162
  504     19       1                                           44
************************ INDIVIDUAL STATIONS ************************

              <———— OUTSIDE CALL ————————————————————————><-INTERCOM—>
EXT STATION-NAME ATTA ANSD NOT-ANSD DIALLED ICM–TRSF TRK-TRK PICKUP ANSD
DIALLED
201 Operator       9   360    11      15       341      0       0    39    72
202 Barbara       12   60      2      80        20      0      12    49    66
```

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```
203 Ivania        4   25      1      36       3      0      18    86    29
```


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4.10 Traffic Report Overview

```
A************************ SYSTEM STATISTICS ************************

1 BEGINNING: Mar/15/2001 08:00           ENDING: Mar/15/2001 17:30

2 ACTIVITY SYSTEM TOTAL

3 INCOMING TRUNK CALLS - ANSWERED..................0000
4 INCOMING TRUNK CALLS - NOT ANSWERED..............0000
5 OUTGOING TRUNK CALLS ............................0000
6 A SELECTED TRUNK WAS BUSY........................0000

7 INTERCOM CALLS - COMPLETED.......................0000
8 INTERCOM CALLS - NOT ANSWERED....................0000

9 TRUNK RECALLS TO STATION.........................0000
10 TRUNK RECALLS TO OPERATOR GROUP.................0000

11 INTERNAL PAGE USED..............................0000
12 EXTERNAL PAGE USED..............................0000
13 ALL PAGE USED...................................0000
```

4.10.1 Beginning & Ending

This identifies when the statistics were collected. It includes dates and time.

4.10.2 Activity

Overall summary of traffic in the system for activities 3 to 13.

4.10.3 Incoming Trunk Calls-Answered

These are any incoming trunk calls to the system. These calls are pegged when answered by any device and/or station in the system whether it is a new call or a recall.

4.10.4 Incoming Trunk Calls-Not Answered

These are any incoming trunk calls that were not answered by any station or device in the systems. These are the same calls that would be flagged as abandoned in SMDR.

4.10.5 Outgoing Trunk Calls

These are all outgoing trunk calls that were originated by any station or through the DISA feature. Outgoing trunk calls are valid calls as defined by the SMDR START TIME in MMC 501.

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4.10.6 A Selected Trunk Was Busy

Pegged every time a trunk or trunk group was busy regardless of the manner in which it was selected(e.g., DTS key, LCR, '9', 7XX, TRK GROUP SELECT, SPD, External call forward, DISA).

4.10.7 Intercom Calls Completed

These are all intercom calls that were completed to any station, station group or device.

4.10.8 Intercom Calls Not Completed

These are all intercom calls that were not answered and resulted in the calling party hanging up. A call to a station group that overflows to another station is considered not answered whether the overflow destination did or did not answer.

4.10.9 Trunk Recalls to Station

These are trunk calls that were placed on any kind of hold and recalled a station. These are also trunk calls that were transferred and were not answered and recalled the transferring station. This includes members of the operator group that put calls on hold and then recall the operators station.

4.10.10 Trunk Recalls to Operator Group

These are any trunk calls that recalled to the operator group.

4.10.11 Internal Page Used

Peg count of every time internal page was accessed.

4.10.12 External Page Used

Peg count for every time external page was accessed.

4.10.13 All Page Used

Peg count of every time the all page feature was accessed. This does not include internal or external page, only 55+ * or PAGE *.

```
B*************************** TRUNK GROUPS ***************************

       1 GROUP         2 OUTGOING          3 BUSY
         9                0000              0000
         800              0000              0000
         801              0000              0000
```


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4.10.14 Group

A listing of all trunk groups assigned in the system.

4.10.15 Outgoing

These are the number of outgoing trunk calls made using each trunk group. Pegged every time a member of this trunk group was used to make a valid outgoing call. A valid outgoing call is defined by the SMDR Start Time programmed in MMC 501.

4.10.16 Busy

This is the number of times each trunk group was busy when someone attempts to access it.

C********** INDIVIDUAL TRUNKS **********

1TRUNK	2TRUNK-NAME	3ATTA	4ANSD	5NOT-ANSD	6OUTGOING	7BUSY
701		0000	0000	0000	0000	0000
702		0000	0000	0000	0000	0000
703		0000	0000	0000	0000	0000
704		0000	0000	0000	0000	0000
705		0000	0000	0000	0000	0000
706		0000	0000	0000	0000	0000
707		0000	0000	0000	0000	0000
708		0000	0000	0000	0000	0000
709		0000	0000	0000	0000	0000
710		0000	0000	0000	0000	0000

4.10.17 Trunk

A listing of each trunk in the system.

4.10.18 Trunk Name

The names of each trunk as programmed in MMC 404.

4.10.19 ATTA

Average Time To Answer for trunks is counted in the number of seconds that ringing voltage is detected at the trunk interface and the timer stops when trunk is answered by station or device in the system. The ATTA is the sum of all answered times divided by the answered call count.

4.10.20 ANSD

This is the number of times this specific trunk was answered by any station or device whether it is a new call or a recall.

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4.10.21 Not-ANSD

This is the number of times this specific trunk rang the system but was not answered. These are the same calls that would be flagged as abandoned in SMDR.

4.10.22 Outgoing

This is the number of times this trunk was used to make an outgoing call. A valid outgoing call is defined by the SMDR START TIME programmed in MMC 501.

4.10.23 Busy

This is the number of times this trunk was busy when accessed by a button or dial code.

```
D************************ STATION HUNT GROUPS ************************

          <———————— 1 OUTSIDE CALL ————————————————————> 5 <-INTERCOM->
            2GROUP          3ANSD          4NOT-ANSD            6ANSD
              500           0000             0000               0000
              501           0000             0000               0000
              502           0000             0000               0000
              503           0000             0000               0000
              504           0000             0000               0000
```

4.10.24 Outside Calls

These statistics are for outside calls that reach these station groups regardless how they arrive there.

4.10.25 Group

Listing of all station groups in the system.

4.10.26 ANSD (Answered)

This column is a peg count of all answered trunk calls that rang to the specific group directory number regardless of how these arrived.

4.10.27 Not-ANSD

The number of times any trunk call directed to the specific group number was not answered by any member of the group.

4.10.28 Intercom

An intercom call made from a station or device within the system to the specific group number.

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4.10.29 ANSD

This is a count of how many times an intercom call was answered by any group member of that specific group.

```
E************************* INDIVIDUAL STATIONS **********************
                                    1                              11
                  <———————————————-- OUTSIDE CALL ——————————-———————> <—INTERCOM—->
2         3        4   5      6        7       8         9      10    12     13
EXT STATION-NAME ATTA ANSD NOT-ANSD DIALLED ICM-TRSF TRK—TRK PICKUP ANSD
DIALLED
201    0000      0000  0000   0000    0000    0000     0000    0000  0000
202    0000      0000  0000   0000    0000    0000     0000    0000  0000
203    0000      0000  0000   0000    0000    0000     0000    0000  0000
204    0000      0000  0000   0000    0000    0000     0000    0000  0000
205    0000      0000  0000   0000    0000    0000     0000    0000  0000
```

4.10.30 Outside Calls

These statistics are for outside calls that in any way reach individual stations or devices.

4.10.31 EXT

Listing of all extension numbers in the system. This also includes AA, VM, and SVMI-8 ports.

4.10.32 Station Name

The name for each particular station as programmed in MMC 104.

4.10.33 ATTA

ATTA(Average Time To Answer) for stations is counted in the number of seconds that ringing signal is applied to a station for trunk calls and recalls. The ATTA is the sum of all answered times divided by the answered call count. Use the same calculation method as used for individual trunk ATTA.

4.10.34 ANSD

ANSD is a count of how many times an outside call was answered by the specific station. Outside callers recalling a station are not counted again when they are answered.

4.10.35 Not-ANSD

Not-ANSD is a count of how many times a trunk call was directed to the station but was not answered by this station.

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4.10.36 Dialled

Peg count of how many times the station made a valid outside call. An outside call is defined by the SMDR start time in MMC 501.

4.10.37 ICM-TRSF

ICM-TRSF(Intercom-Transfer) is the number of times a trunk call was successfully transferred to another station using the intercom. It includes both screened and unscreened transfer.

4.10.38 TRK-TRK

This is the number of times a trunk call was transferred to another trunk(tie line)
This is called a trunk-to-trunk transfer. This field gets pegged every time the station completes a trunk to trunk transfer.

4.10.39 Pickup

This is a count of the outside calls that were picked up by the specific station. Picked-up calls are calls that are not ringing at your station but were answered by you. This peg count is separate from the number of answered call in #5 of Individual Stations section E.

4.10.40 Intercom

Statistics for intercom calls. An intercom call made from a station or a station device within the system to another station.

4.10.41 ANSD

This is the number of times an intercom call was answered by this specific station. Screened transfers count as an answered intercom call.

4.10.42 Dialled

The number of times the specific station dialled another station or station group. Screened transfers count as a dialled intercom call.

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4.11 Sample Alarm Report

ALARM REPORT FOR [OfficeServ 100 SAMPLE] MAR/24/1999 19:45

MM/DD/YYYY	ERR.TIME	ERR.CODE	ERROR DISPLAY	POSITION
03/14/1999	16:45:00	[MNF03]	IPC Error	C1-S01
03/14/1999	16:45:00	[MNF03]	IPC Error	C1-S04
03/14/1999	16:45:00	[MNF03]	IPC Error	C1-S01
03/14/1999	16:45:00	[MNF03]	IPC Error	C1-S04
03/14/1999	16:45:00	[MNF03]	IPC Error	C1-S01
03/14/1999	16:45:00	[MNF03]	IPC Error	C1-S04
03/14/1999	16:46:00	[MNF01]	Card Out	C1-S05
03/14/1999	16:46:00	[MNF02]	Card In	C1-S05
03/14/1999	16:47:00	[MJD01]	SYNC Failure	C1-S05
03/14/1999	16:47:00	[MJD02]	SYNC Recvry	C1-S05
03/16/1999	16:47:00	[MNF04]	Trunk Fault	C1-S06-P03
03/16/1999	16:48:00	[MNF05]	Trunk Recvry	C1-S06-P01
03/16/1999	16:48:00	[MNF05]	Trunk Recvry	C1-S06-P02
03/16/1999	16:48:00	[MNF05]	Trunk Recvry	C1-S06-P03
03/18/1999	16:51:00	[MNF01]	Card Out	C1-S02
03/18/1999	16:51:00	[MNF02]	Card In	C1-S02
03/19/1999	17:23:00	[MNF01]	Card Out	C1-S03
03/20/1999	17:24:00	[MJC01]	DTMF Fault	BASE
03/20/1999	17:24:00	[MNF03]	IPC Error	C1-S01
03/20/1999	17:24:00	[MNF03]	IPC Error	C1-S04
03/24/1999	17:24:00	[MJD19]	PRI Restart	C1-S07

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4.12 DECT Service

OfficeServ 100 system provides DECT cordless communications in a single office or throughout a large commercial or industrial complex. To implement this service, you need 3BSI card, DB(Daughter Board) card and DECT handsets. Users of this service meet improved overall efficiency, since staff can be reached or make calls wherever they are.

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ANNEX A. Abbreviation

A

AA	Automated Attendant
AC	Alternating Current
ACC	Account Code
AOM	Add On Module
AP	Access Point
ANSD	Answered
ATTA	Average Time To Answer

B

BGM	Background Music
BLF	Busy Station Indications
BRI	Basic Rate Interface
BSI	Base Station

C

CAD	Call Activity Display
CCBS	Call Completion to Busy Subscriber
CCNR	Cell Completion on No Reply
CFB	Call Forward Busy
CFNR	Call Forward No Response
CFU	Call Forward Unconditional
CID	Caller Identification
CLI	Call Line Identification
COS	Class Of Service
CTI	Computer Telephony Integration

D

DB	Daughter Board
DCS	Digital Communication System
DDI	Direct Dial In
DID	Direct Inward Dialling
DECT	Digital Enhanced Cordless Telecommunications
DHCP	Dynamic Host Configuration Protocol

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DISA	Direct Inward System Access
DLI	Digital Line Interface
DND	Do Not Disturb
DNIS	Dialled Number Identification Service
DPIM	Door Phone Interface Module
DSP	Digital Signal Processor
DSS	Direct Station Selection
DTMF	Dual Tone Multi Frequency

E

EPROM	Erasable Programmable ROM

I

ICC	Internet Call Center
ICM-TRSF	Intercom-Transfer
ID	Identification
IMAP	Internet Messaging Access Protocol
IN-SCP	Intelligent Network Service Control Point
IP	Internet Protocol
IPC	Inter Processor Communication
IPM	Inter Processor Communications And Memory Module
ISDN	Integrated Services Digital Network
ITP	IP Telephone

K

KDB	Keyset Daughter Board
KSU	Key Service Unit

L

LAN	Local Area Network
LCD	Liquid Crystal Display
LCP	Local Control Processor
LCR	Least Cost Routing
LED	Light Emitting Diode

M

MCP	Main Control Processor
MGI	Media Gateway Interface
MISC	Miscellaneous
MMC	Man Machine Communication
MOH	Music On Hold
MWSLI	Message Waiting Single Line Interface

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O

OHVA	Off-Hook Voce Announce
OPX	Off Premises Extension

P

PABX	Private Automatic Branch Exchange
PCB	Printed Circuit Board
PCM	Pulse Code Modulation
PCMMC	PC based Man Machine Communication
PLL	Phase Locking Loop
PRI	Primary Rate Interface
PRS	Polarity Reverse Detection
PSTN	Public Switched Telephone Network

Q

Q-SIG	Q-Signalling

R

RAM	Random Access Memory
RGU	Ring Generator Unit

S

SIP	Session Initiation Protocol
SLI	Single Line Interface
SLT	Single Line Telephone
SMDR	Station Message Detail Recording
SMS	Short Message Service
SVMi	Samsung Voice Mail integrated

T

TAPI	Telephony Application Programming Interface
TEPRI	T1E1PRI
TRK	Trunk

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U

UA	User Agent
UCD	Uniform Call Distribution
USB	Universal Serial Bus

V

VLAN	Virtual LAN
VoIP	Voice over Internet Protocol

W

WBS	Wireless Base Station
WIP	Wireless IP Phone

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OfficeServ 100

General Description Guide

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